ORDER NO.VMD0202005C8

Service Manual

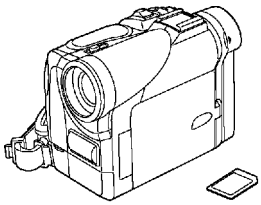
Digital Video Camera/Recorder

Panasonic Mini DV PAL USB MultiMediaCard™ SD

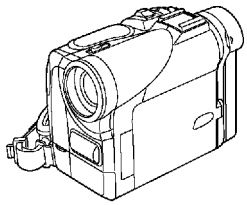
NV-GS5EG

NV-GS5EGM / NV-GS5B / NV-GS5EN / NV-GS5A / NV-GS5ENT / NV-GS4EG / NV-GS4EGM / NV-GS4B / NV-GS3EG / NV-GS3EGM / NV-GS3B / NV-GS3EN / NV-GS3A / NV-GS3ENT / NV-GS1EG / NV-GS1EGM / NV-GS1B

Q3-MECHANISM



NV-GS5
NV-GS4



NV-GS3
NV-GS1

SPECIFICATIONS

SPECIFICATIONS

Digital Video Camera

ITEM	SPECIFICATION
POWER	Source: DC 7.9 / 7.2 V Consumption: Recording 2.6 W (When using Viewfinder) 3.6 W (When using LCD Monitor)
RECORDING FORMAT	Mini DV (Consumer-use Digital Video SD Format)
TAPE USED	6.35 mm digital video tape
RECORDING / PLAYBACK TIME	SP mode: 80 min. with DVM80 LP mode: 120 min. with DVM80
CAMERA	Filter Diameter: 30.5 mm Zoom: 10:1 Power Zoom Monitor: 2.5-inch LCD Lens: Auto Iris, F1.8, Focal Length: 3.15 - 31.5 mm Macro (Full Range AF) Image Sensor: 1/4-inch CCD Image Sensor Viewfinder: Colour Electronic Viewfinder ; NV-GS5 Series,GS3EN/A/ENT : Electronic Viewfinder ; NV-GS4 Series,GS3EG/EGM/B,GS1 Series
VIDEO	Recording System: Digital Component Television System: CCIR; 625 Lines, 50 Fields PAL Colour Signal Video Output Level: 1.0 Vp-p, 75Ω S-Video Output Level: Y Output; 1.0 Vp-p, 75Ω C Output; 0.3 Vp-p, 75Ω (NV-GS5 Series,GS3EN/A/ENT) Video Input Level: 1.0 Vp-p, 75Ω S-Video Input Level: Y Input; 1.0 Vp-p, 75Ω C Input; 0.3 Vp-p, 75Ω
AUDIO	Recording System: PCM Digital Recording 16 bit (48 kHz/2 ch) 12 bit (32 kHz/4 ch) Audio Output Level (Line): 316 mV, 600Ω Audio Input Level (Line): 316 mV, 10 kΩ or more ; NV-GS5 Series,GS3EN/A/ENT Mic Input: Mic sensitivity -50dB(0dB=1V/Pa,1kHz) (Stereo Mini Jack)
CARD MEMORY FUNCTIONS (NV-GS5 Series, GS4 Series)	Recording Media: SD Memory Card, MultiMediaCard Image Compression: JPEG Video Compression: MPEG4 ; NV-GS5 Series Still Image Size: VGA Recording; 640 X 480 Sound Compression: G.726 ; NV-GS5 Series

ITEM	SPECIFICATION
STANDARD ILLUMINATION	1,400 lx
MINIMUM REQUIRED ILLUMINATION	1 lx (Colour Night View Mode)
USB / Mini System (NV-GS5 Series, GS4 Series)	Card reader / writer function, USB 2.0 compliant (maximum 12Mbps) No copyright protection support / Mini System editing terminal
DIGITAL STILL PICTURE	Digital Still Picture Output, Control Signal Input / Output (Transfer rate: max. 115 kbps)
DIGITAL INTERFACE	DV Input/Output Terminal (IEEE1394, 4-pin) ; NV-GS5 Series,GS3 Series DV Output Terminal (IEEE1394, 4-pin) ; NV-GS4 Series,GS1 Series
MICROPHONE	Stereo
SPEAKER	1 round speaker ¢20 mm
OPERATING TEMPERATURE	0 - 40 °C
OPERATING HUMIDITY	10 - 80 %
WEIGHT	Approx. 470 g(without Battery and DV Cassette) Approx. 550 g(with CGR-D08R and DVM60)
DIMENSIONS	Approx. 68 (W) x 89 (H) x 114 (D) mm
STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack Unit 1 pc. DC Cable 1 pc. AC Cord 1 pc. AC Cord ; NV-GS5EN/ENT,GS3EN/ENT 1 pc. AV Cable 1 pc. Remote Controller 1 pc. Bottom-type Battery 1 pc. Head Cleaner ; NV-GS5EN/A/ENT,GS3EN/A/ENT 1 pc. Hood Cap Unit 1 pc. Hood Strap 1 pc. Driver Soft ; NV-GS5 Series,GS4 Series,GS3EN/A/ENT 1 pc. USB Connection Cable ; NV-GS5 Series,GS4 Series 1 pc. SD Card ; NV-GS5 Series,GS4 Series 1 pc. Shoulder Belt 1 pc. Interface Cable ; NV-GS3EN/A/ENT 1 pc. Universal Remote Controller

Weight and dimensions are approximate values.
Specifications may change without prior notice.

Panasonic

1. INTRODUCTION

1.1. INTRODUCTION

This service manual contains technical information which will allow service personnel's to understand and service this model.Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

Information for Q-Mechanism should be referd to the another manual as below.

Order No. : VMD0109026C8

Note 1:

These movie cameras use AC Adaptor is VSK0581-A.

The service manual for AC Adaptor is separate volume.

Order number for AC Adaptor .....VSK0581-A : VMD0105013C8

Note 2:
1) This service manual does not contain the following information, because of the impossibility of sevicing at component level.

1. Schematic Diagram, Block Diagram and C.B.A. layout of Main C.B.A./ Sub C.B.A.

2. Parts List for individual parts of Main C.B.A./ Sub C.B.A.

3. Exploded View and Parts List for individual parts of Mechanism Unit.

2) The following category is/are recycle module part. Please send it/them to Central Repair Center.
***Main C.B.A. (VEP03G17B: NV-GS5 SERIES, VEP03G17F: NV-GS4 SERIES, VEP03G17D: NV-GS3EG/EGM/B,**
VEP03G17C: NV-GS3EN/A/ENT, VEP03G17E: NV-GS1 SERIES)
***Sub C.B.A. (VEP03G18B: NV-GS5 SERIES, VEP03G19D: NV-GS4 SERIES, VEP03G18C: NV-GS3EN/A/ENT)**

When a part replacement is required for repairing each Main C.B.A. and/ or Mechanism block, replace the assembly parts.
(Main C.B.A., Sub C.B.A. and/ or Mechanism Unit)
The following circuits are contained in Main C.B.A.

1. Main Connection Circuit

2. Drive Circuit

3. Video 1 Circuit

4. Video 2 Circuit

5. Control Circuit

6. Camera Circuit

7. Lens Drive Circuit

8. LCD Circuit

9. Head/ Rec Amp Circuit

10. Power Circuit

The following circuits are contained in Sub C.B.A. (NV-GS5 SERIES, NV-GS4 SERIES, NV-GS3EN/A /ENT)

1. Sub Connection Circuit

2. Ex Input Circuit

3. DSC MPEG Circuit

4. DSC JPEG Circuit

5. SD Audio Circuit

1.2. FEATURE COMPARISON CHART

FUNCTION	GS5	GS4	GS3		
	EG/EGM/B/EN/A/ENT	EG/EGM/B	EG/EGM/B	EN/A/ENT	E(
Card Function (Multi Media Card, SD Card)	●	●	—	—	
External DV/ VIDEO Input	●	—	—	●	
MPEG4/ JPEG recording	MPEG4	JPEG	—	—	

2. CAUTION FOR AC CORD (VJA0940 TYPE)

2.1. INFORMATION FOR YOUR SAFETY

IMPORTANT
Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

FOR YOUR SAFETY
DO NOT REMOVE THE OUTER COVER
To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2.2. CAUTION FOR AC MAINS LEAD

For your safety, please read the following text carefully.
This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amperes and it is approved by ASTA or BSI to BS1362
Check for the ASRA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.
If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safety.
There is a danger of severe electrical shock if the cut off plug is inserted into any 13-ampere socket.
If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt, please consult a qualified electrician.

2.2.1. Important

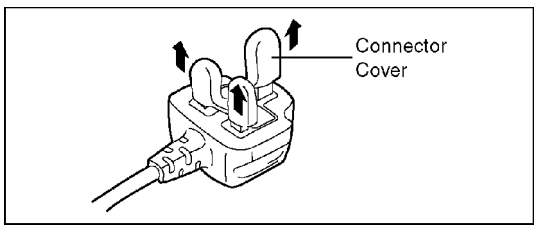
The wires in this mains lead are coloured in accordance with the following code:

Blue	**Neutral**
Brown	**Live**

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.
Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.

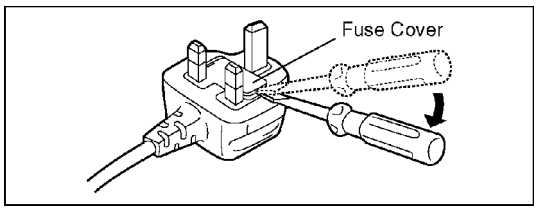
2.2.2. Before use

remove the Connector Cover as follows.

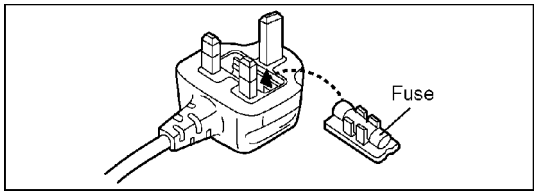


2.2.3. How to replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.



3. SERVICE CAUTION

3.1. EEPROM DATA FOR SPARE PARTS OF THE MAIN C.B.A.

When the Main C.B.A. is replaced, the fixed and average data must be changed by Tatsujin kit according to the Movie Camera's suffix.
Then, confirm and/or adjust the VTR and Camera section one by one.

3.2. SERVICE EXTENSION CABLES.

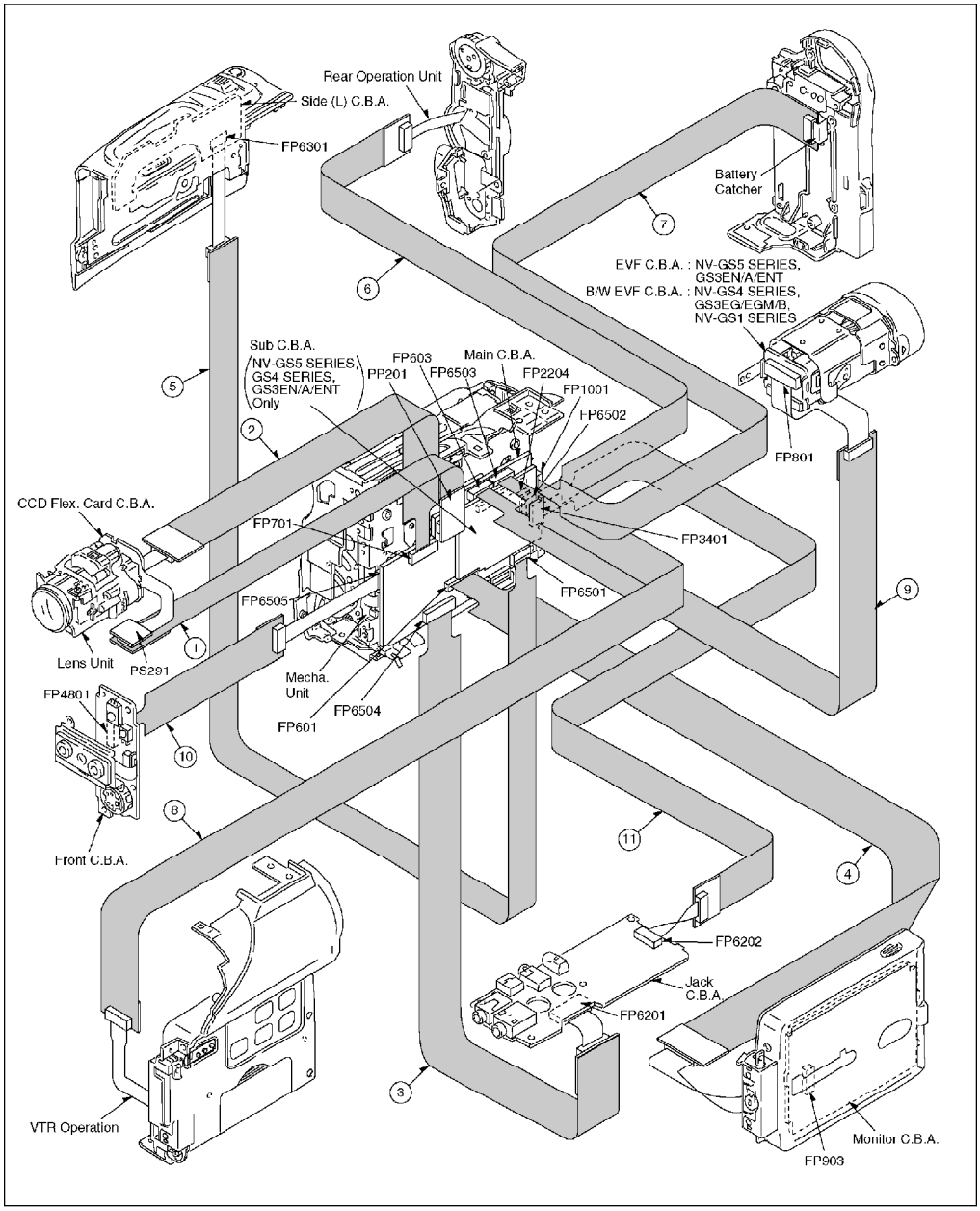
This models is required the following extension cables for all connections.

Note 1:
Use the following extension cables when checking or adjusting individual circuit boards except module Parts.
(Main C.B.A. and Sub C.B.A.)

Ref.	Part No.	Pin	Part Name	Connection	Q'ty	Remarks
(1)	VFK1595D1425	14	Flat Cable	PP201 (Main) - PS291 (CCD)	1	as NV-DS15
(2)	VFK1443	18	Flat Cable	FP701 (Main) - Lens Unit	1	as NV-DS99
(3)	VFK1459	39	Flat Cable	FP6504 (Main) - FP6201 (Jack)	1	as NV-EX1
(4)	VFK1492	26	Flat Cable	FP601 (Main) - FP903 (Monitor)	1	as NV-DS9
(5)	VFK1442	21	Flat Cable	FP6501 (Main) - FP6301 (Side L)	1	as NV-DS77
(6)	VFK1452	17	Flat Cable	FP6502 (Main) - Rear Operation	1	as NV-DS77
(7)	VFK1364	14	Flat Cable	FP1001 (Main) - Battery Catcher	1	as NV-DS55
(8)	VFK1443	18	Flat Cable	FP6503 (Main) - VTR Operation	1	as NV-DS99
(9)	VFK1286	16	Flat Cable	FP603 (Main) - FP801 (EVF)	1	as NV-DX100
(9)	VFK1441	8	Flat Cable	FP603 (Main) - FP801 (B/W EVF)	1	as NV-DS77
(10)	VFK1364	14	Flat Cable	FP6505 (Main) - FP4801 (Front)	1	as NV-DS55
(11)	VFK1440	10	Flat Cable	FP3401 (Sub) - FP6202 (Jack)	1	as NV-DS77

How to use extension cables.

Fig. T1-1



3.3. LOCATION FOR SPARE CONNECTORS OF THE MAIN C.B.A. & SUB C.B.A.

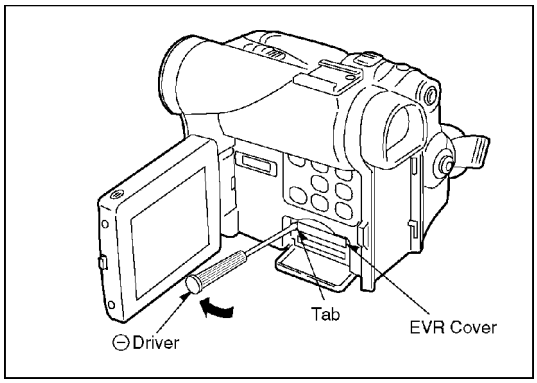
3.3.1. MAIN C.B.A.

3.3.2. SUB C.B.A. (NV-GS5 SERIES, GS4 SERIES, GS3EN/A/ENT ONLY)

4. PREPARATION FOR ELECTRICAL ADJUSTMENT

1. Unlock the locking tab and remove the EVR connector as shown in Fig. E1 .
2. Then connect the following cables as shown in Fig. E2 .

Fig. E1



Part No.	Part Name	Q'ty	Remarks
VFK1395	232C(M3.5)I/F Cable	1	
VFK1308E	Measuring Board	1	
VFK1309	EVR Connector Board	1	
VFK1317 or VFK1511	30 Pin Flat Cable	2	200mm Type 300mm Type
VJA0941	DC Output Cable	1	For AC Adaptor
VFK1164TAR3A	Step up Ring	1	For Collimator
VFK1714	Connection Adaptor (30pin)	1	
VFK1763	Connection Adaptor (60-30pin)		

Fig. E2

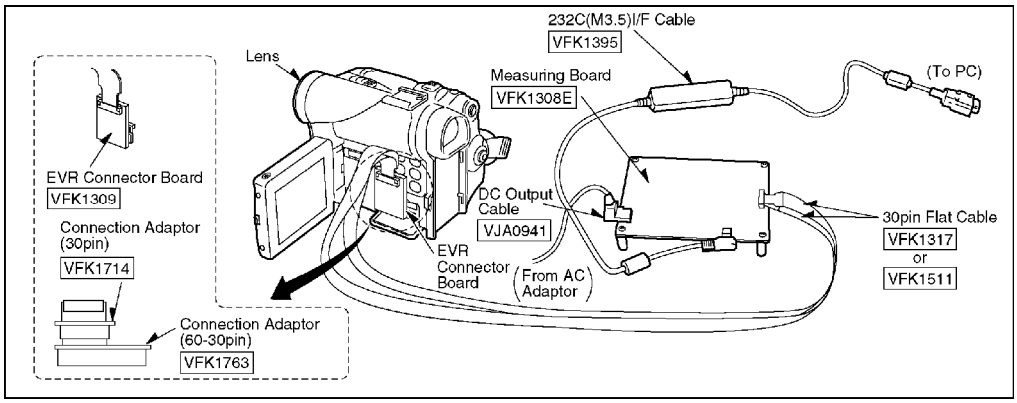
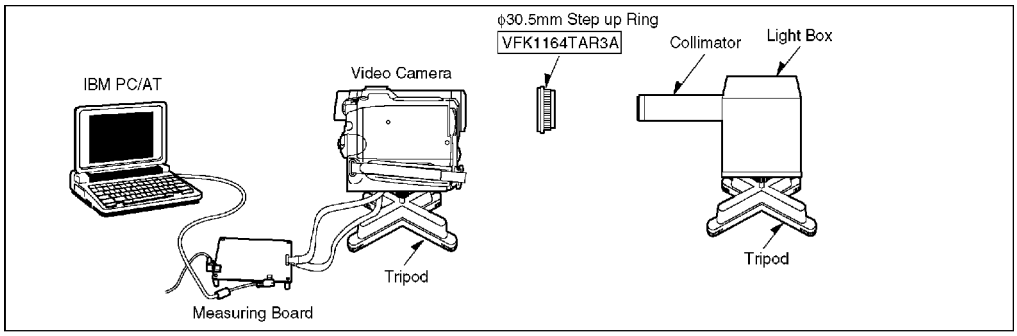


Fig. E3

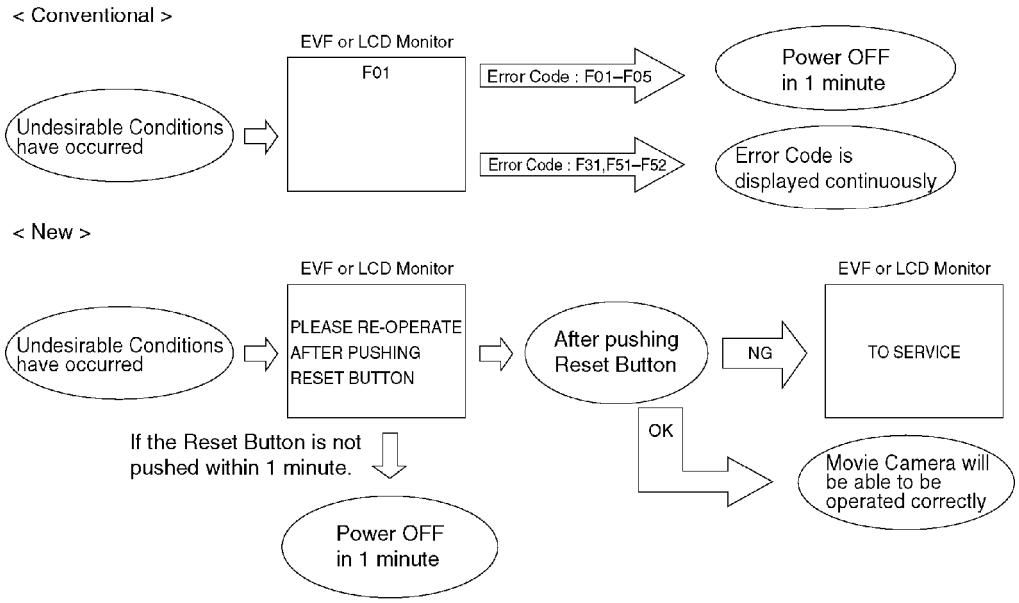


5. SERVICE MODE

5.1. New Error Code Display

Conventionally, the error code has been displayed automatically on the EVF or LCD Monitor when undesirable conditions have occurred. With the New Error Code Display, the error code has not been displayed automatically as follows except some error codesF31(Data Transmission

Error), U10(Dew) and U11(Head Clogging).


< Conventional >
EVF or LCD Monitor
F01
Undesirable Conditions have occurred
Error Code : F01–F05
Power OFF in 1 minute
Error Code : F31,F51–F52
Error Code is displayed continuously
< New >
EVF or LCD Monitor
PLEASE RE-OPERATE AFTER PUSHING RESET BUTTON
Undesirable Conditions have occurred
After pushing Reset Button
NG
EVF or LCD Monitor
TO SERVICE
OK
Movie Camera will be able to be operated correctly
If the Reset Button is not pushed within 1 minute.
Power OFF in 1 minute

Note:

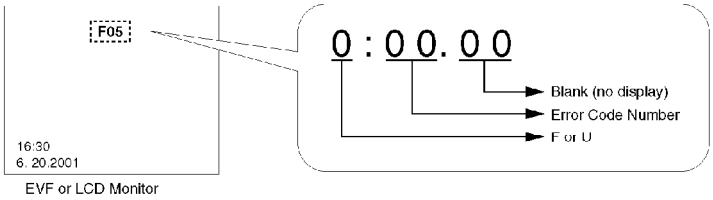
1. **The only some error codes F31, U10 and U11 has displayed automatically on the EVF or LCD monitor as usual.**
2. **The Power LED also has been flashed for 1 min. when undesirable condetions have occurred.(See below)**

5.2. Viewing Error Code

When displaying the Error Code on the EVF or LCD Monitor, push the FADE/STOP and REC START/PAUSE buttons simultaneously for more 3 seconds.

Note:

When the cassette tape is inserted, this operation will not be worked.



EVF or LCD Monitor

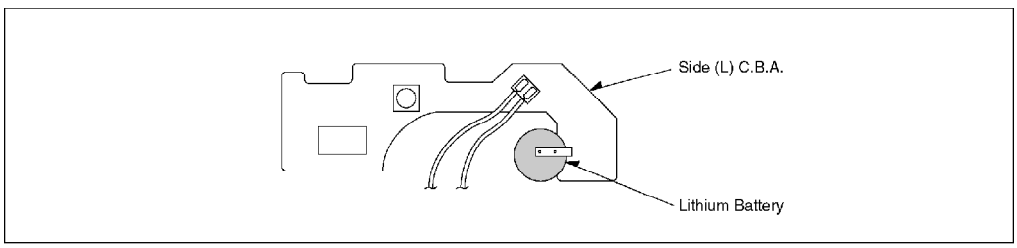
DISPLAY	CONDITION	POWER OFF TIMING / POWER LED FLASHING TIMING
F01	T-Reel Lock	After 1 minute flashing the LED
F02	S-Reel Lock	After 1 minute flashing the LED
F03	Unloading Lock	After 1 minute flashing the LED
F04	Loading Lock	After 1 minute flashing the LED
F05	Cylinder Lock	After 1 minute flashing the LED
F31	Data Transmission Error	Not turning OFF
F51	Zoom Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
F52	Focus Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
U10	Dew Detection	After 18 seconds flashing the LED Power LED is flashed at 1 Hz timing
U11	Head Clogging	Not turning OFF

6. HOW TO REPLACE THE LITHIUM BATTERY (PROCEDURE)

1. Remove the Side Case (L) C.B.A.. (Refer to Disassembly Procedures.)

2. Unsolder the Lithium Battery “VSB0407” and then replace the new one. (See Fig. B1 .)

Fig. B1



Note:
The lithium battery is a critical component. (Type No.: VSB0407 Manufactured by Panasonic.)
It must never be subjected to excessive heat or discharge.
It must therefore only be fitted in equipment designed specifically for its use.
Replacement batteries must be of the same type and manufacture.
They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.
Do not attempt to re-charge the old battery or re-use it for any other purpose.
It should be disposed of in waste products destined for burial rather than incineration.

CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's instructions.

PRECAUTION
Le fait de remplacer incorrectement la pile peut présenter des risques d'explosion.
Remplacer la pile uniquement par une pile identique ou de type équivalent recommandée par le fabricant. Se débarrasser des piles usagées conformément aux instructions du fabricant.

VORSICHT
Bei einer falsch eingesetzten Batterie besteht Explosionsgefahr. Nur mit einer vom Hersteller empfohlenen Batterie vom gleichen Typ ersetzen.
Verbrauchte Batterien beim Fachhändler oder einer Sammelstelle für Sonderstoffe abliefern.

VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

7. OPERATING GUIDE

8. ADJUSTMENT PROCEDURES

8.1. DISASSEMBLE FLOW CHART

This flow chart indicates the disassembly steps the cabinet parts, C.B.A. and Mecha. Unit in order to access to be serviced. When reinstalling, perform the steps in the reverse order.

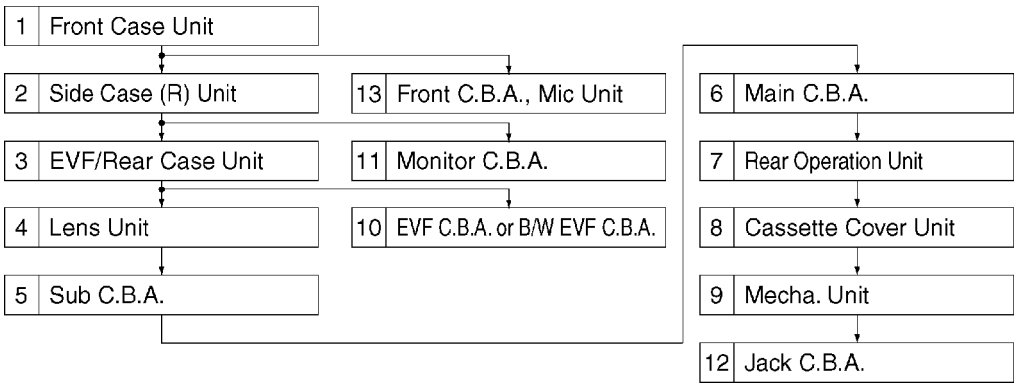
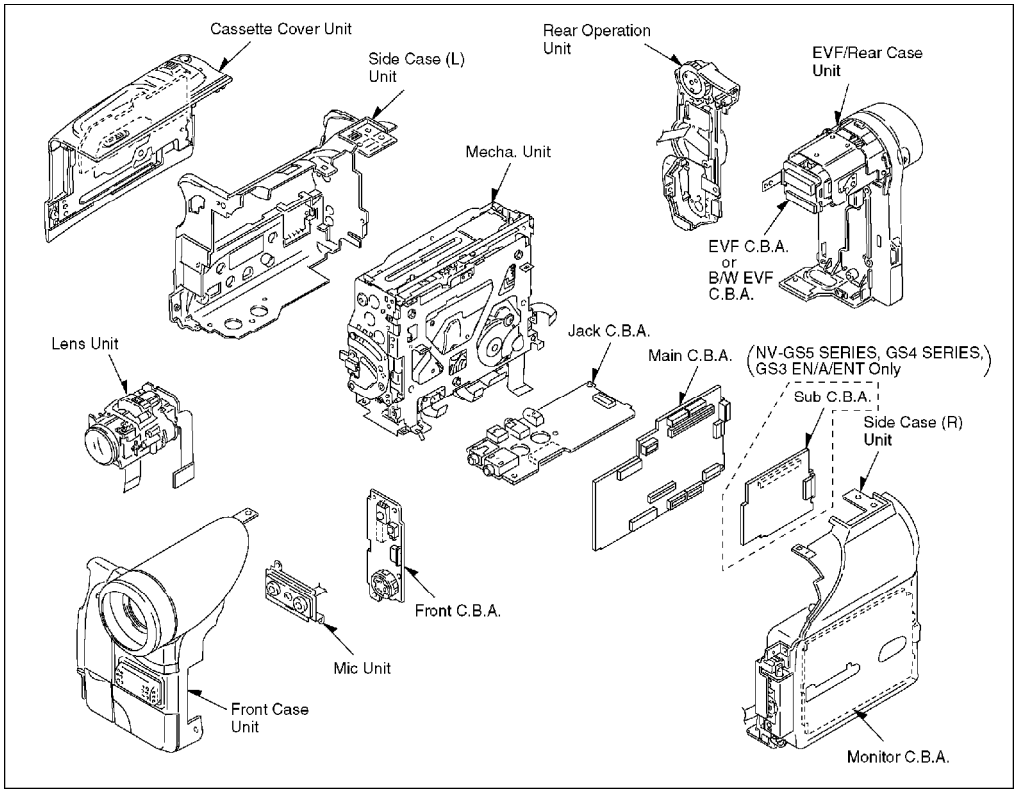


Fig. F1



8.2. DISASSEMBLY PROCEDURES

Flow-Chart for Disassembly Procedure

No.	Item/Part	Fig.	Removal (Screw,Connector,Flex. & Other)
1	Front Case Unit	Fig. D2	1-Screw (A)
		Fig. D3	1-Screw (B)
		Fig. D4	3-Screws (C) Shoe Hold Plate
		Fig. D5	2-Screws (D)
		Fig. D6	1-Connector FP4801 Front Case Unit
2	Side Case (R) Unit	Fig. D7	2-Screws (E)
		Fig. D8	2-Screws (F)
		Fig. D9	2-Tabs 2-Connectors FP601,FP6503 Side Case (R) Unit

No.	Item/Part	Fig.	Removal (Screw,Connector,Flex. & Other)
3	EVF / Rear Case Unit	Fig. D10	1-Screw (G)
		Fig. D11	1-Screw (H)
		Fig. D12	1-Screw (I) 2-Connectors FP603,FP1001 EVF / Rear Case Unit
		Fig. D13	Eye Cap 1-Screw (K) 2-Tabs EVF View Adj. Unit 2-Screws (J) EVF Unit / Rear Case Unit
4	Lens Unit	Fig. D14	1-Screw (L) 1-Tab 2-Connectors FP701,PP201 1-Screw (M) Lens Frame (L) , Lens Unit
5	Sub C.B.A. (NV-GS5 Series,GS4 Series,GS3EN /A/ENT Only)	Fig. D15	1-Connectors FP3401 (NV-GS5 Series, GS4 Series Only) 1-Connectors PS3001 Sub C.B.A.
6	Main C.B.A.	Fig. D16	1-Screw (N) 6-Connector FP2204,FP6501,FP6502,FP6504,FP6505,FP6506 2-Tabs 4-Connectors FP2001,FP2202,FP2203,FP5001 Main C.B.A.
7	Rear Operation Unit	Fig. D17	Jack Cover (L) Open 1-Screw (O) 1-Screw (P) 1-Screw (Q) 1-Screw (R) Rear Operation Unit

No.	Item/Part	Fig.	Removal (Screw,Connector,Flex. & Other)
8	Cassette Cover Unit	Fig. D18	Cassette Cover Open 1-Screw (S) 1-Screw (U) 2-Screws (T) Cassette Door Lock Button,Cassette Cover Unit
9	Mecha. Unit	Fig. D19	3-Screws (V) 3-Screws (W) 4-Tabs Mecha. Frame Unit / Mecha. Unit
10	EVF C.B.A. (NV-GS5 Series,GS3EN /A/ENT Only)	Fig. D20	1-Connector FP801 EVF Flex. Slide Case Holder,Slide Case 2-Screws (X) 4-Tabs EVF Frame,EVF Click Spring,EVF Unit
		Fig. D21	1-Connector FP802 2-Taabs EVF C.B.A.
	B/W EVF C.B.A. (NV-GS4,GS3EG /EGM/ B,GS1 Series Only)	Fig. D22	1-Connector FP801 B/W EVF Flex. Slide Case Holder,Slide Case 2-Screws (X) 4-Tabs EVF Frame,EVF Click Spring,B/W EVF Unit
		Fig. D23	1-Connector FP802 2-Tabs B/W EVF C.B.A.

No.	Item/Part	Fig.	Removal (Screw,Connector,Flex. & Other)
11	Monitor C.B.A.	Fig. D24	2-Screws (Y) LCD Unit
		Fig. D25	2-Screws (Z) 2-Screws (a) 6-Tabs LCD Case (Upper) Unit 1-Connector FP903 LCD Hing Unit 1-Connector FP901
		Fig. D26	LCD Unit
		Fig. D27	2-Solder Portion 3-Tabs Monitor C.B.A.
12	Jack C.B.A.	Fig. D28	4-Screws (b) 1-Screw (c) Side Case (L) Unit Grip Belt Angle (L) 1-Connector FP6202 (NV-GS5 Series,GS4 Series Only)
		Fig. D29	1-Screw (d) Tripod Plate,Tripod Piece
		Fig. D30	4-Screws (e) Jack C.B.A.
13	Front C.B.A.,Mic Unit	Fig. D31	3-Screws (f) 1-Connector FP4802 Front Earth Angle (Lower) Front C.B.A.
		Fig. D32	1-Screw (g) Mic Unit

Fig. D1

<NV-GS5 SERIES, GS4 SERIES Only>
If the card is inserted,take out it before disassembling.

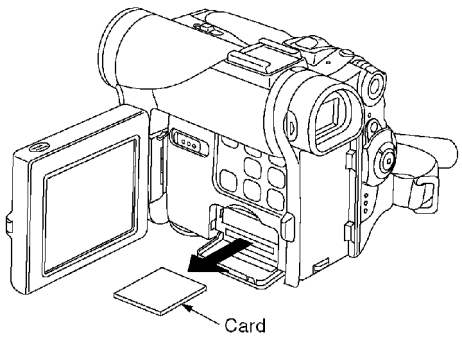


Fig. D2

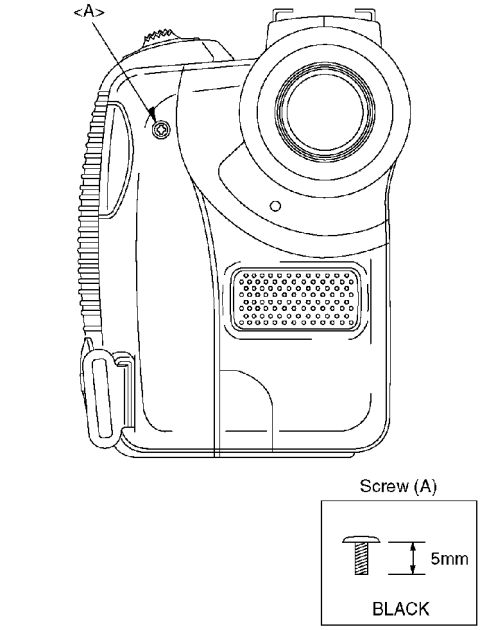


Fig. D3

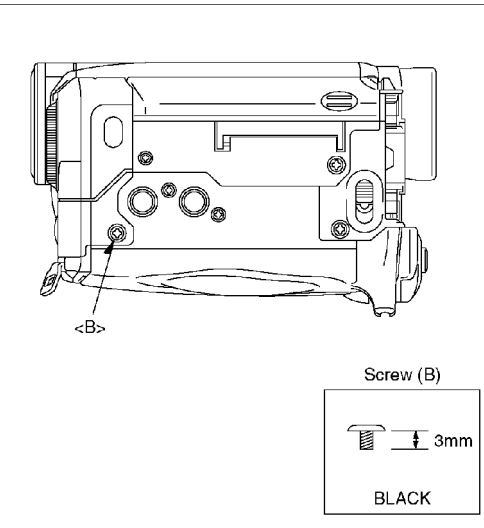


Fig. D4

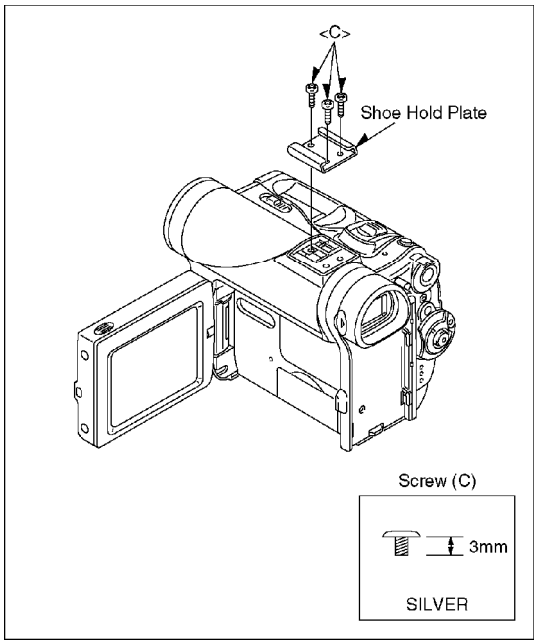


Fig. D5

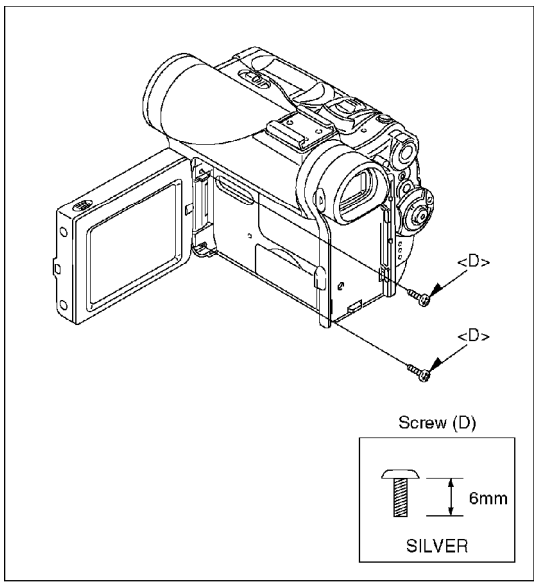


Fig. D6

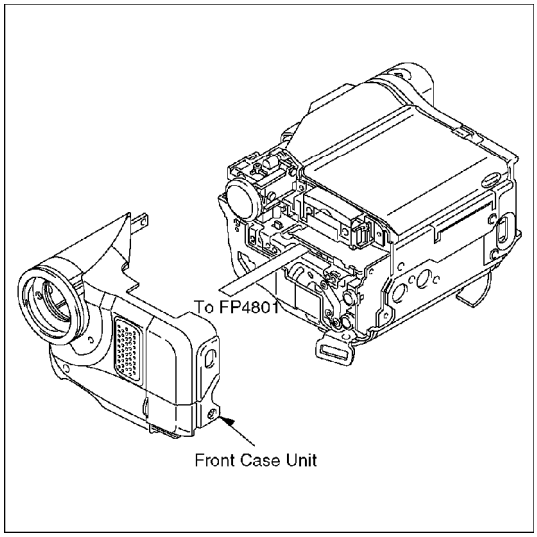


Fig. D7

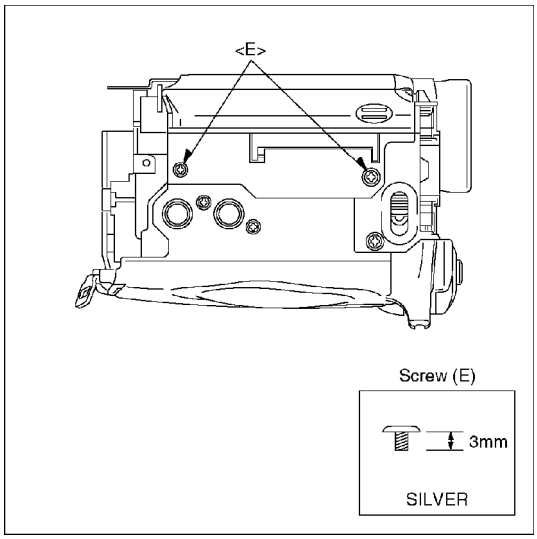


Fig. D8

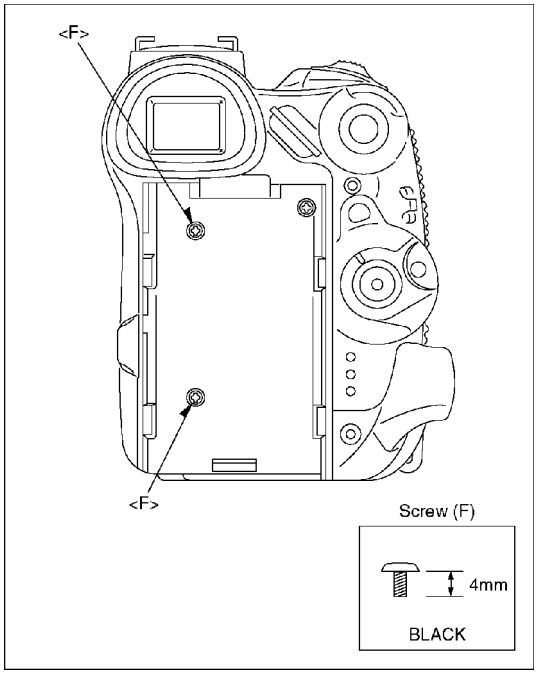


Fig. D9

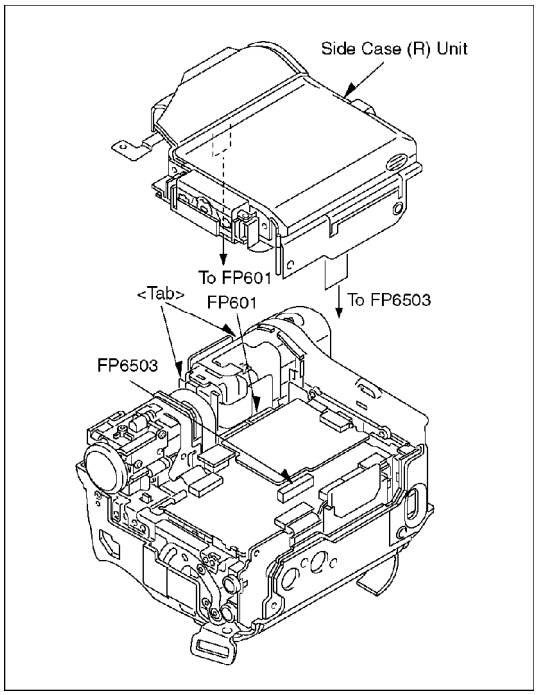


Fig. D10

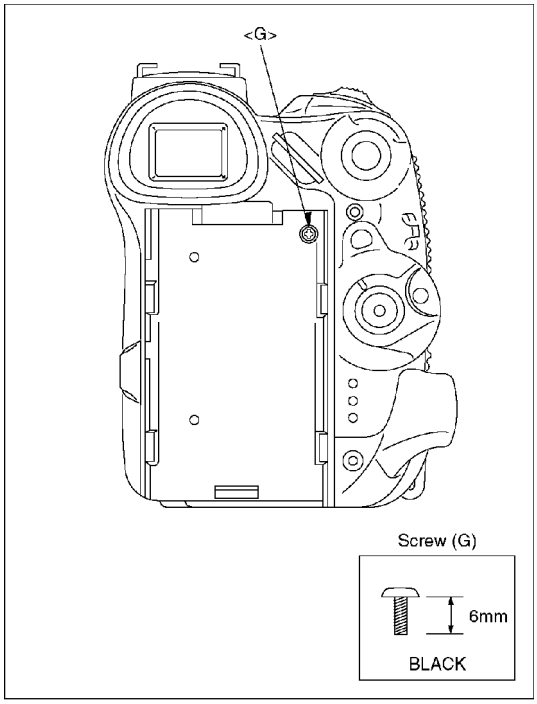


Fig. D11

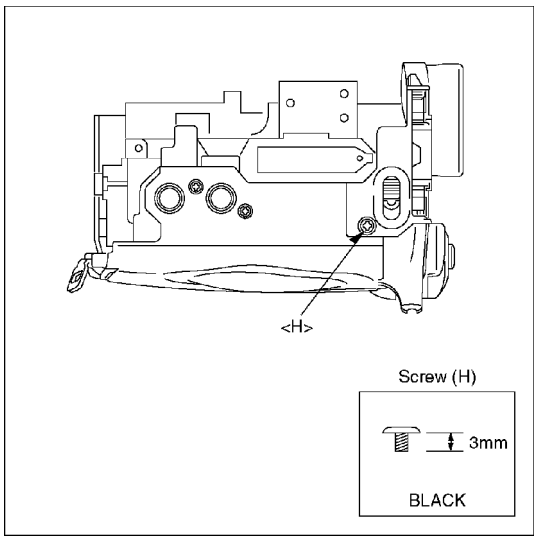


Fig. D12

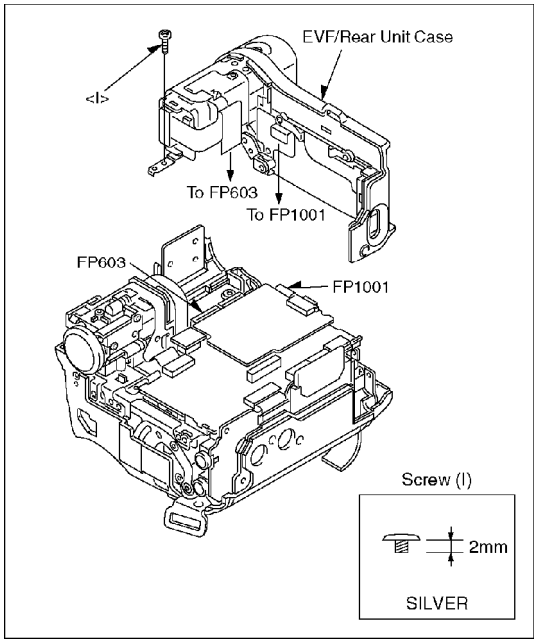


Fig. D13

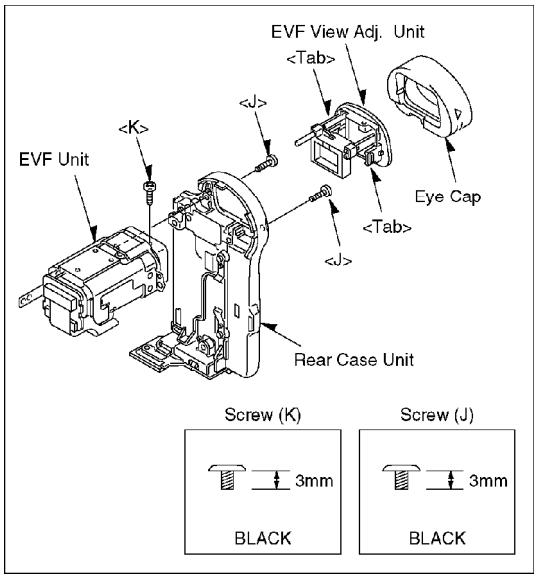


Fig. D14

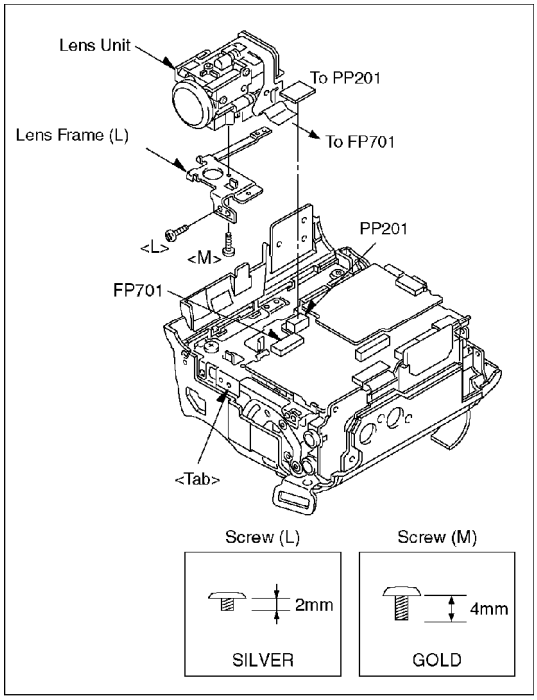


Fig. D15

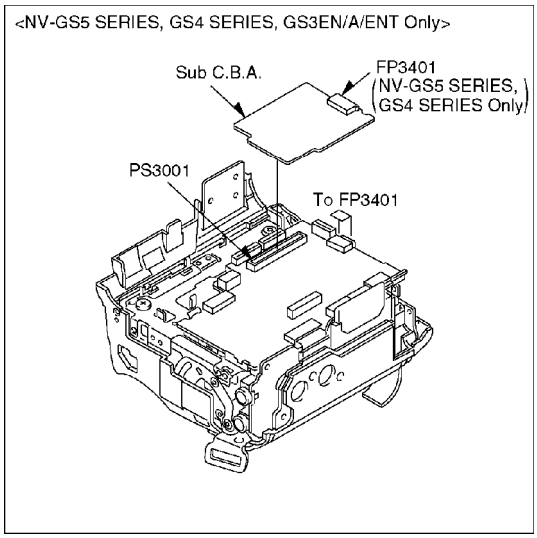


Fig. D16

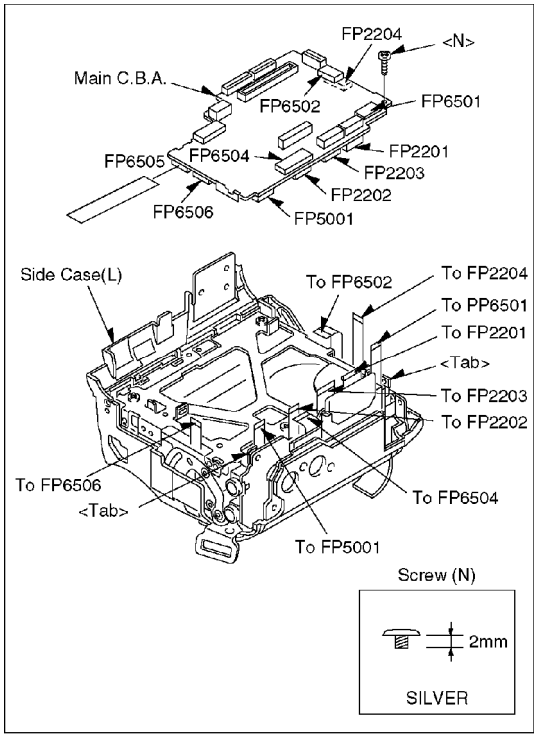


Fig. D17

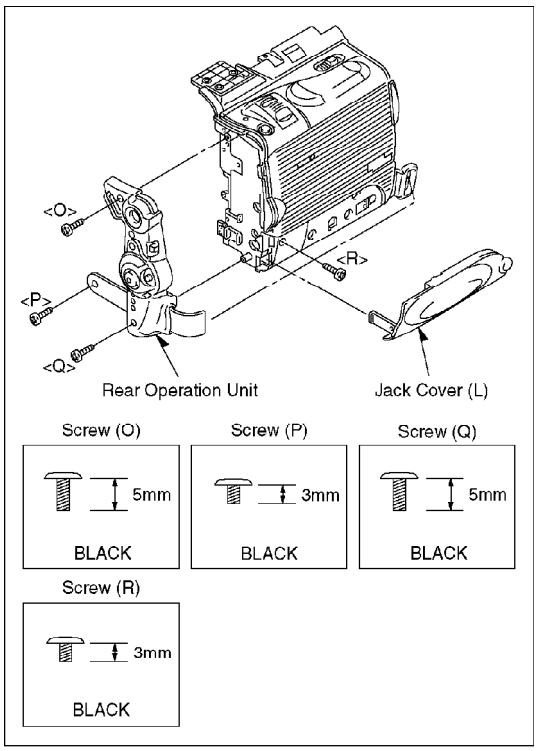


Fig. D18

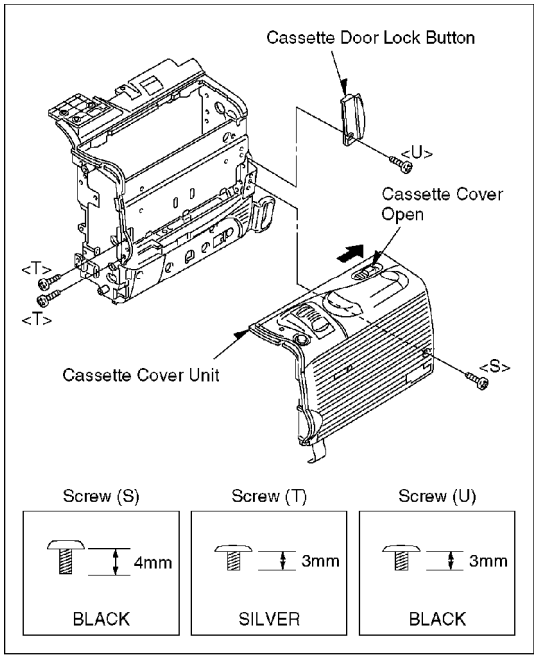


Fig. D19

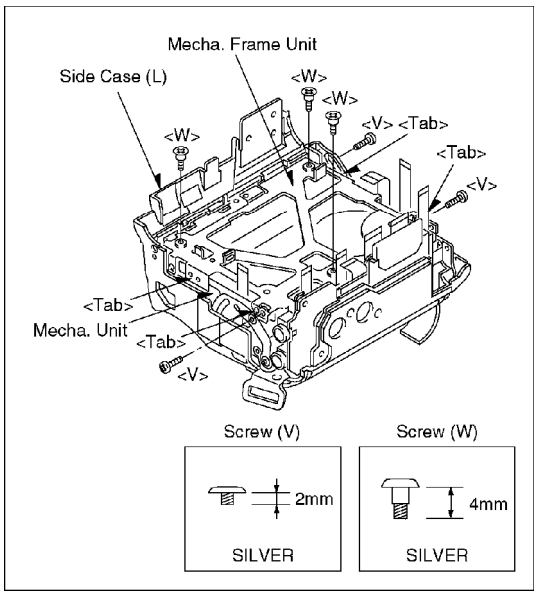


Fig. D20

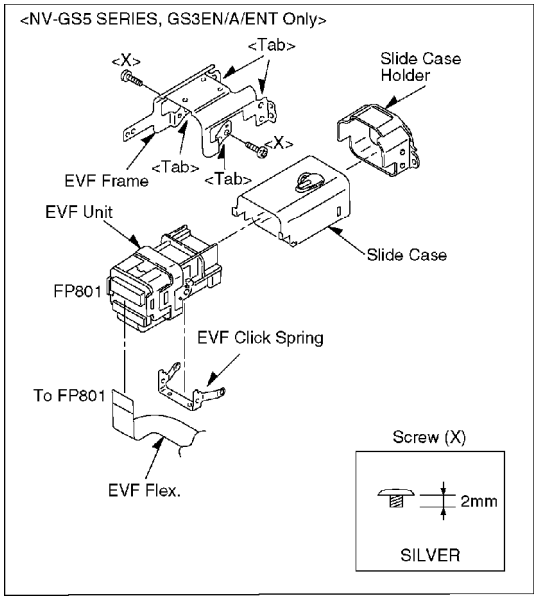


Fig. D21

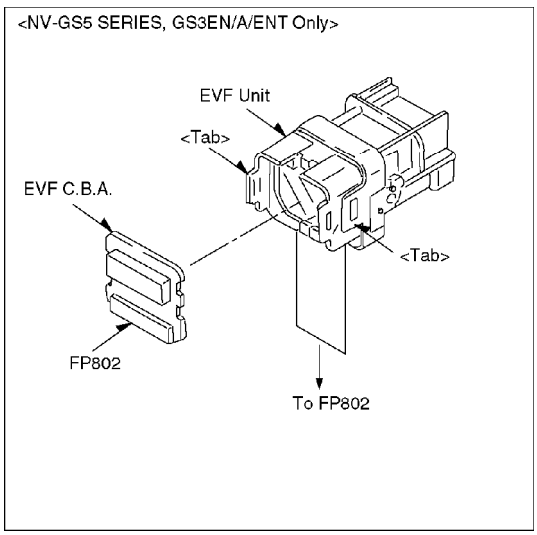


Fig. D22

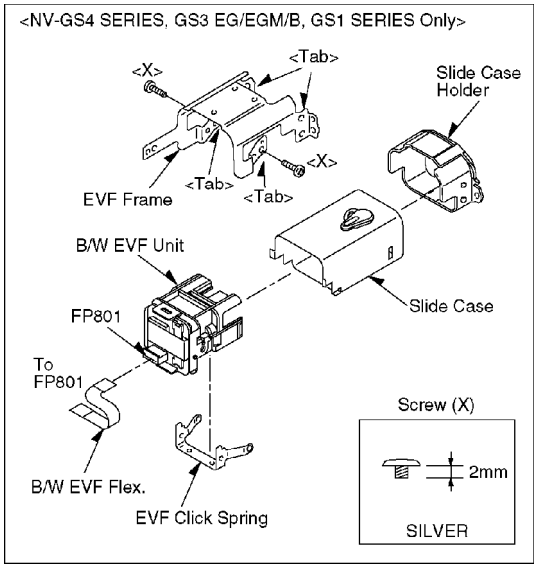


Fig. D23

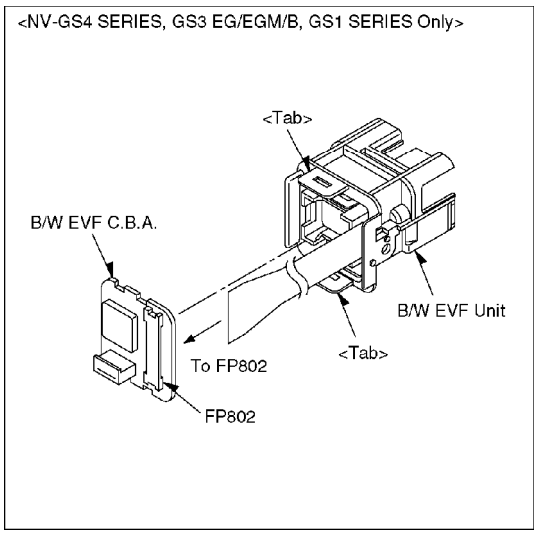


Fig. D24

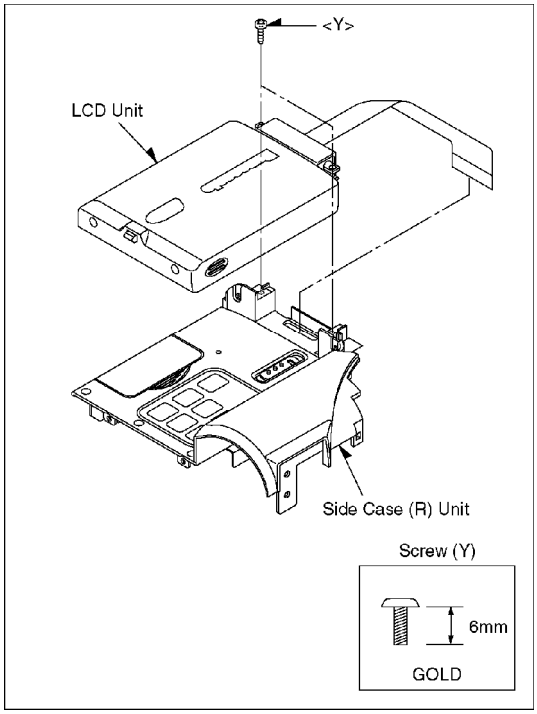


Fig. D25

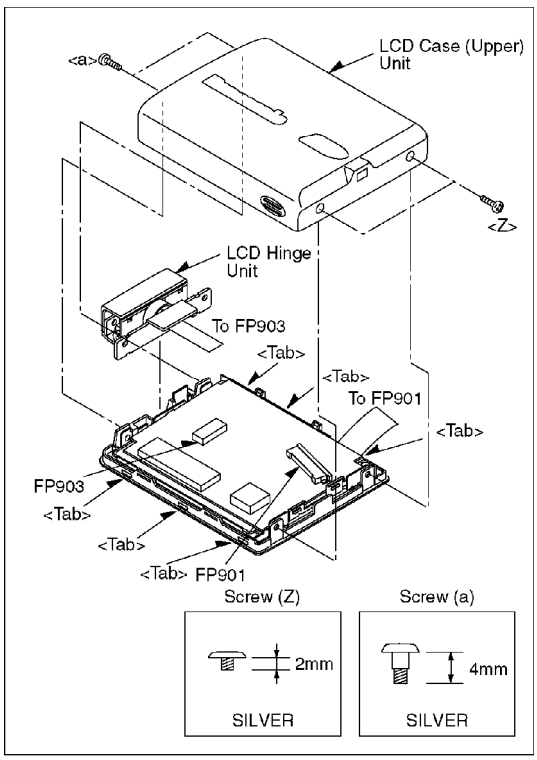


Fig. D26

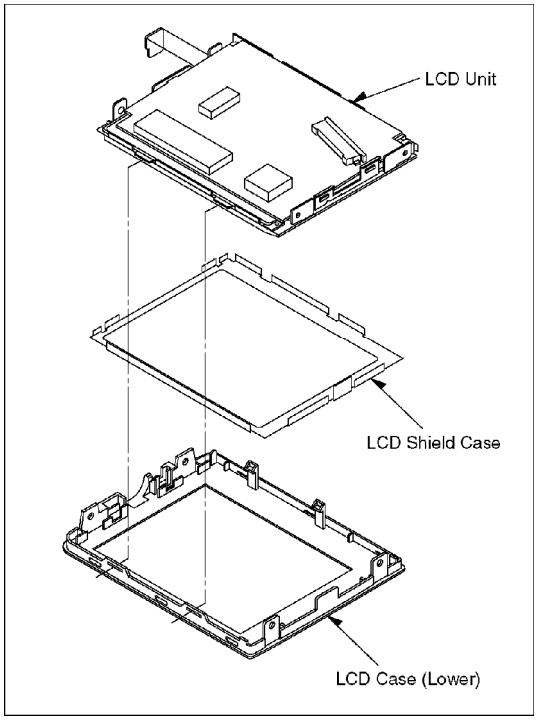


Fig. D27

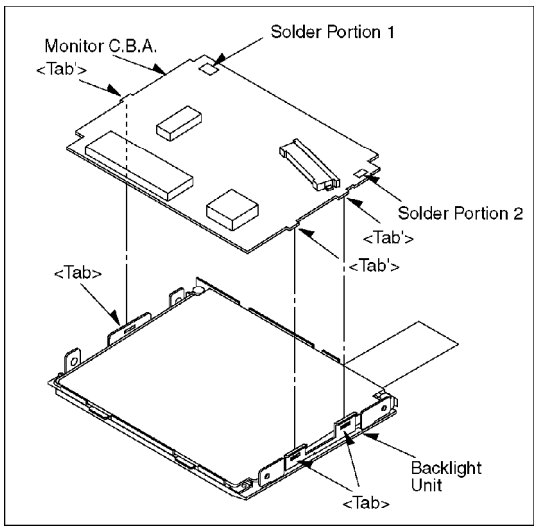


Fig. D28

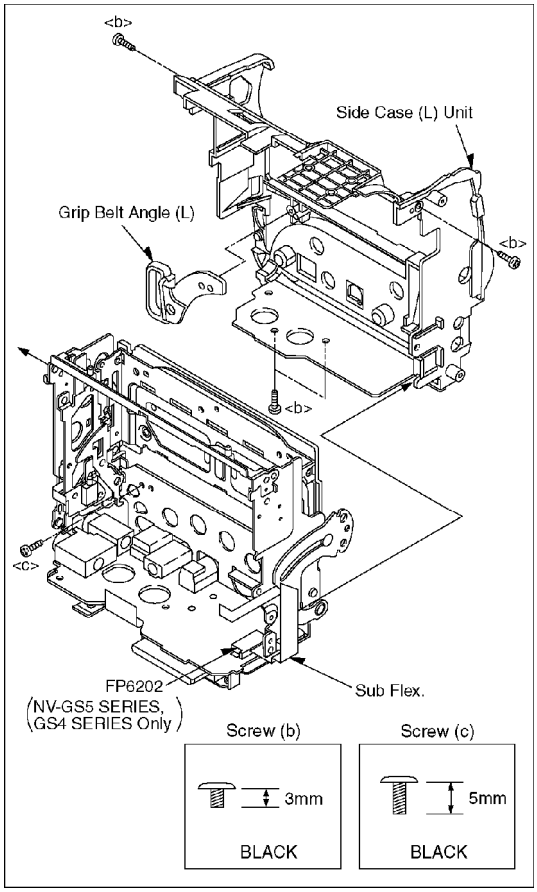


Fig. D29

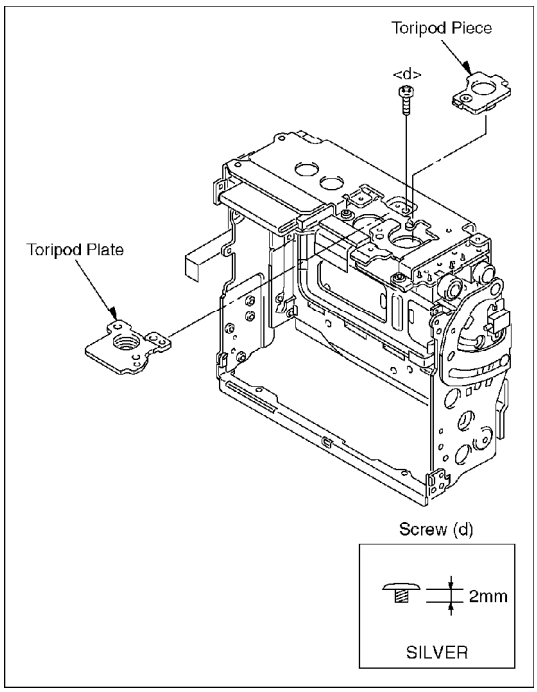


Fig. D30

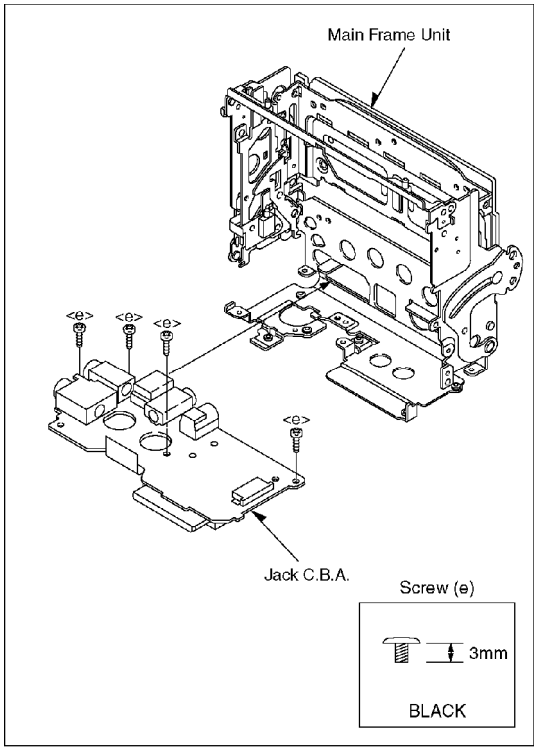


Fig. D31

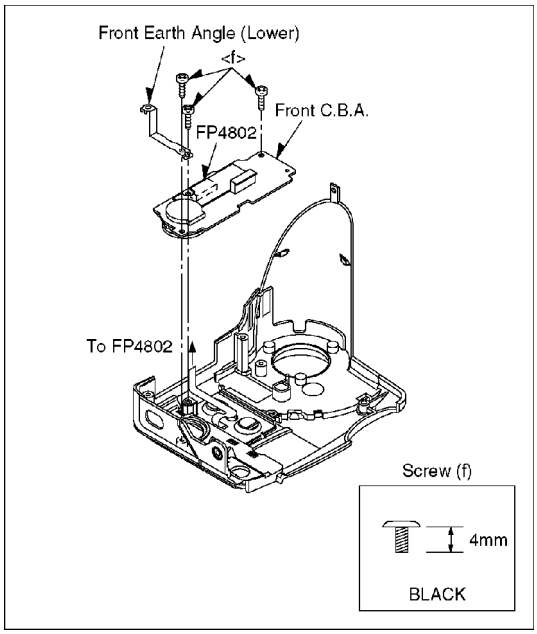
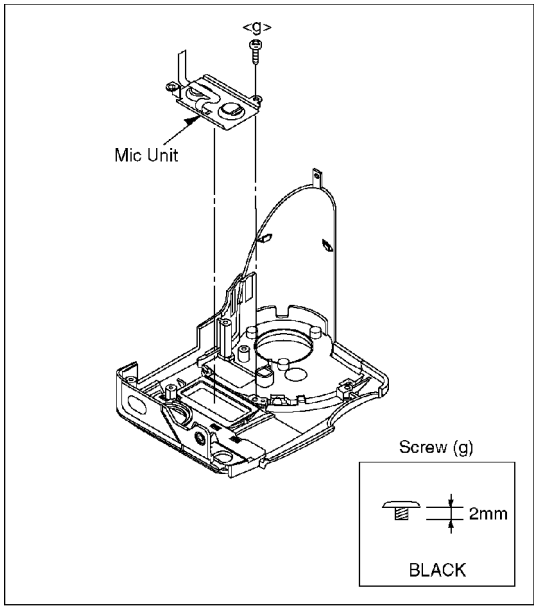


Fig. D32



8.3. DISASSEMBLY PROCEDURES OF CAMERA LENS UNIT

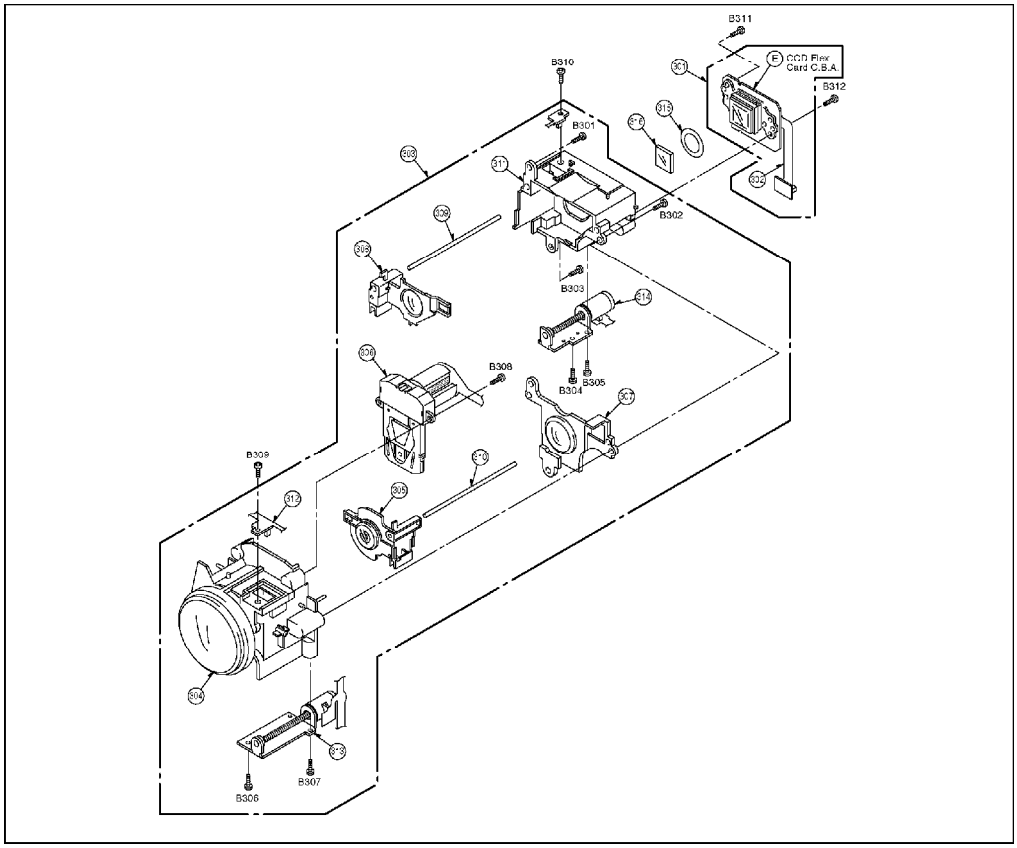
The following flowchart describes order or steps for removing the Camera lens unit and certain printed circuit boards in order to make access to the item needing service. / To reassemble the unit follow the steps in reverse order.

Fig. L1

1. CCD Unit	Ref.No.301
2. CCD Cushion & Crystal Filter	Ref.No.315/316
3. Lens Flex. Unit & Zoom Motor Unit	Ref.No.312/313
4. Master Flange Unit	Ref.No.311
5. 4th Moving Frame Unit	Ref.No.308
6. 3rd Moving Frame Unit	Ref.No.307
7. Iris Unit	Ref.No.306
8. 2nd Moving Frame Unit & Guide Pole	Ref.No.305/309/310

Note 1:
Each Ref-numbers are equivalent to number of Fig.L2 and Parts List.

Fig. L2



9. ABBREVIATIONS

10. WAVEFORM TABLE

11. SCHEMATIC DIAGRAMS

11.1. OVERALL SCHEMATIC DIAGRAM

11.2. INTERCONNECTION SCHEMATIC DIAGRAM

11.3. CCD FLEX. CARD SCHEMATIC DIAGRAM

11.4. SIDE (L) SCHEMATIC DIAGRAM

11.5. CASSETTE COVER UNIT SCHEMATIC DIAGRAM

11.6. REAR OPERATION UNIT SCHEMATIC DIAGRAM

11.7. VTR OPERATION FLEX. UNIT SCHEMATIC DIAGRAM

11.8. SIDE (R) SCHEMATIC DIAGRAM

11.9. R FLEX. UNIT SCHEMATIC DIAGRAM (NV-GS5, GS4 ONLY)

11.10. MAIN FRAME UNIT (CASSETTE DOWN FLEX. CARD) SCHEMATIC DIAGRAM

11.11. EVF SCHEMATIC DIAGRAM (NV-GS5, GS3EN/A/ENT ONLY)

11.12. B/W EVF SCHEMATIC DIAGRAM (NV-GS4, GS3EG/EGM/B, GS1 ONLY)

11.13. FRONT & MIC UNIT SCHEMATIC DIAGRAM

11.14. JACK SCHEMATIC DIAGRAM

11.15. MONITOR SCHEMATIC DIAGRAM

12. CIRCUIT BOARD ASSEMBLIES

12.1. CCD FLEX. CARD C.B.A.

12.2. SIDE (R) C.B.A. (RELAY C.B.A.)

12.3. SIDE (R) C.B.A. (LCD DETECT C.B.A.)

12.4. SIDE (L) C.B.A.

12.5. FRONT C.B.A.

12.6. JACK C.B.A.

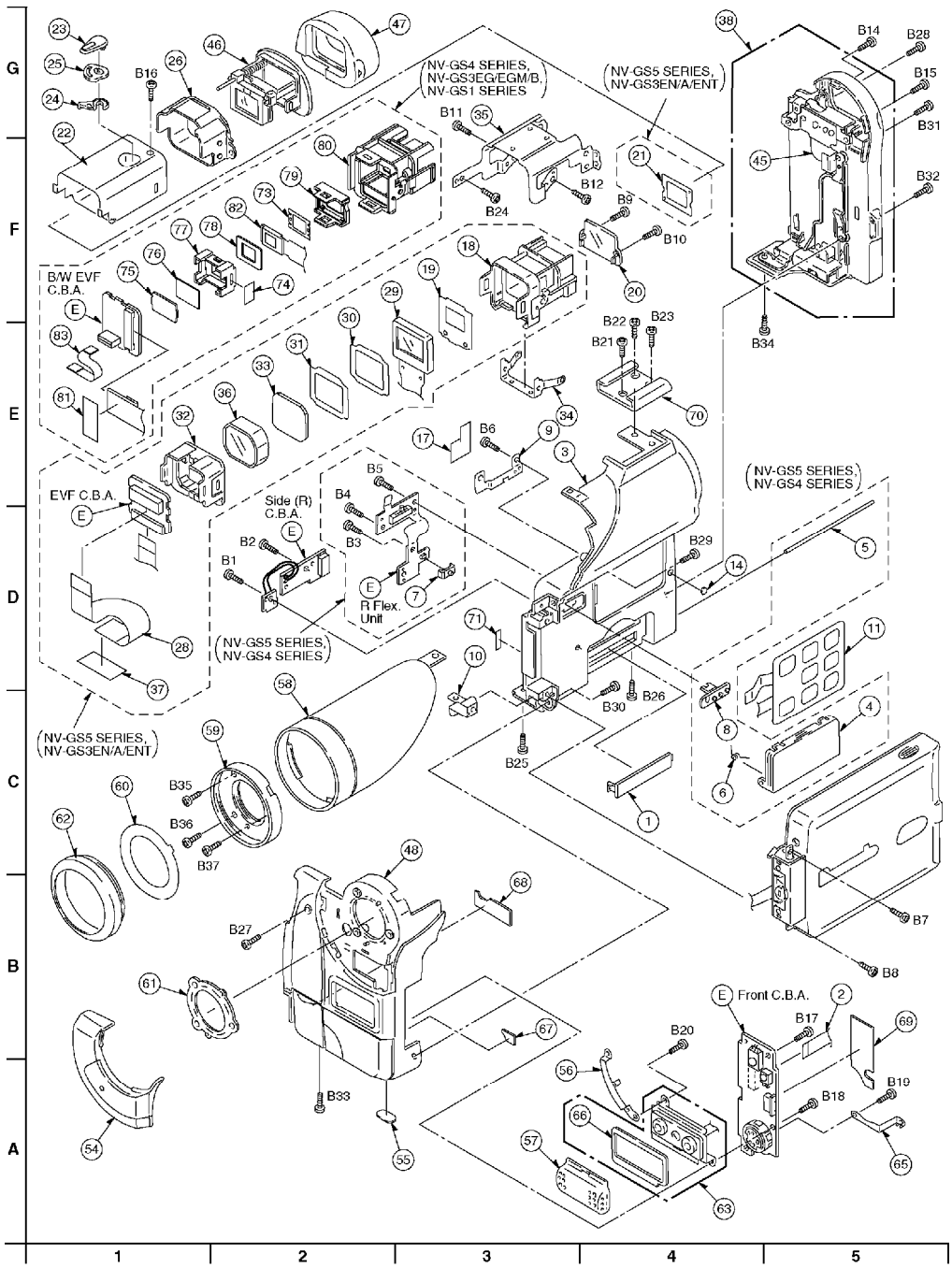
12.7. MONITOR C.B.A.

12.8. EVF C.B.A. (NV-GS5, GS3EN/A/ENT ONLY)

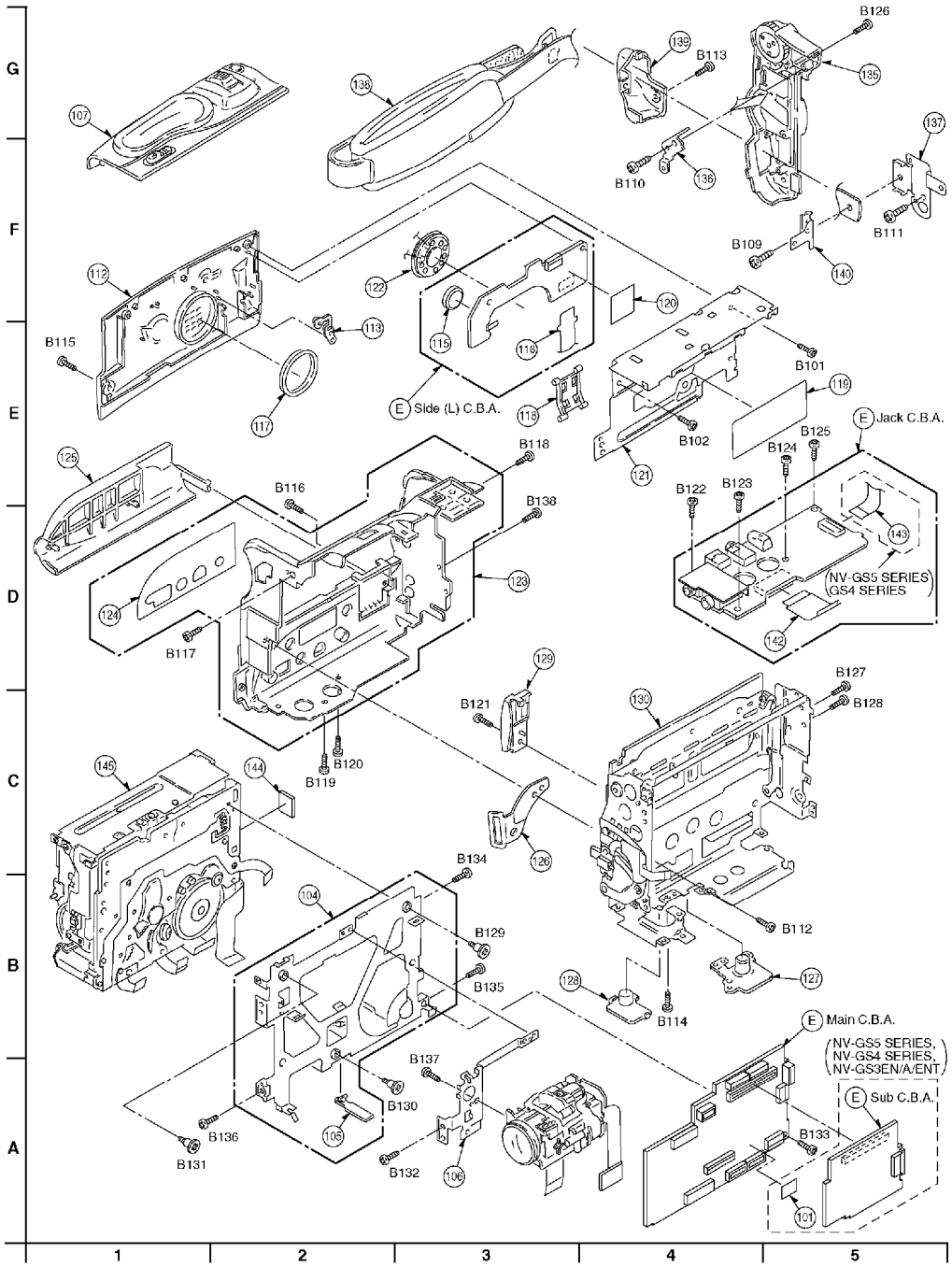
12.9. B/W EVF C.B.A. (NV-GS4, GS3EG/EGM/B, GS1 ONLY)

13. EXPLODED VIEWS

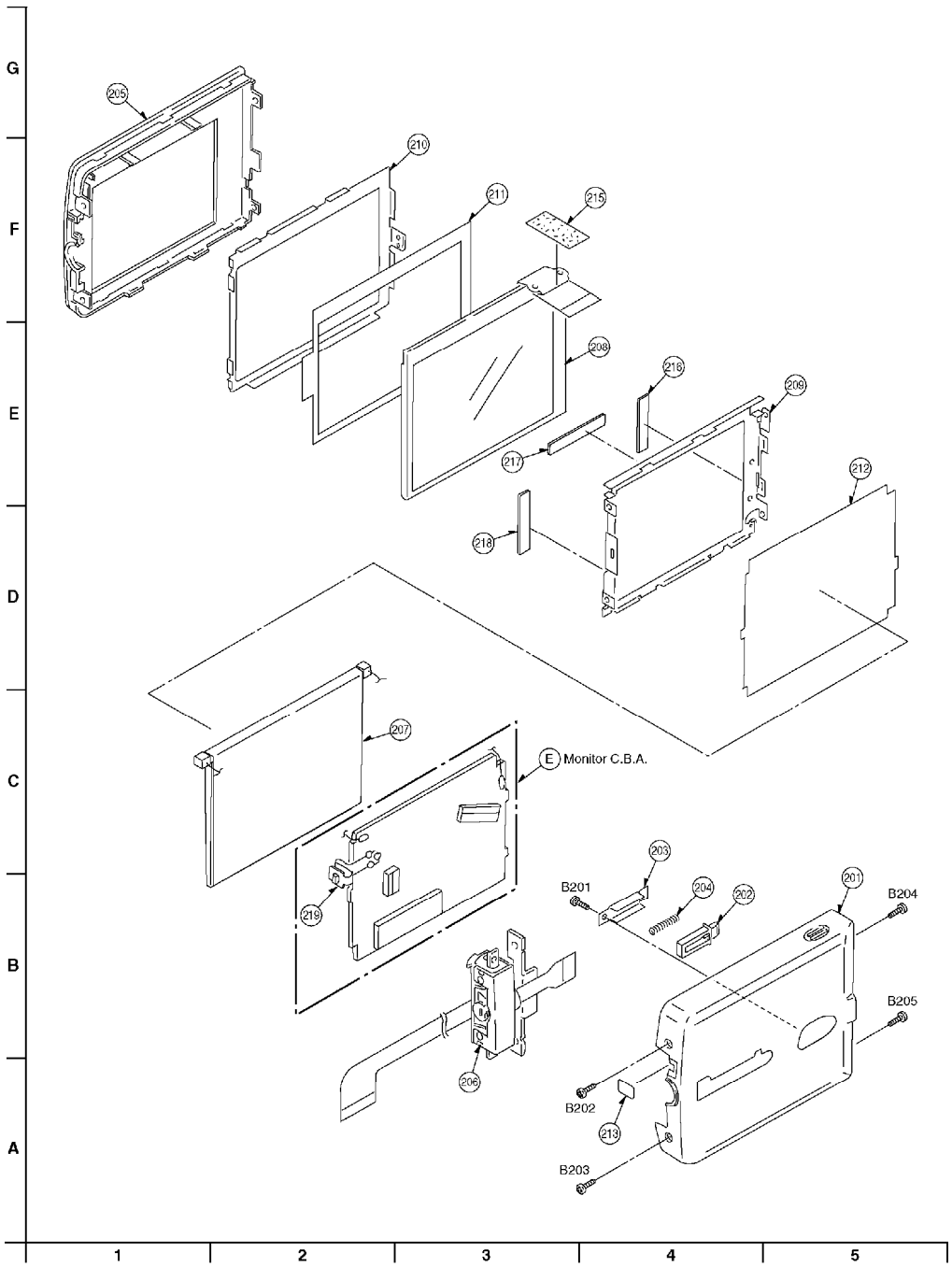
13.1. FRAME & CASING SECTION (1)



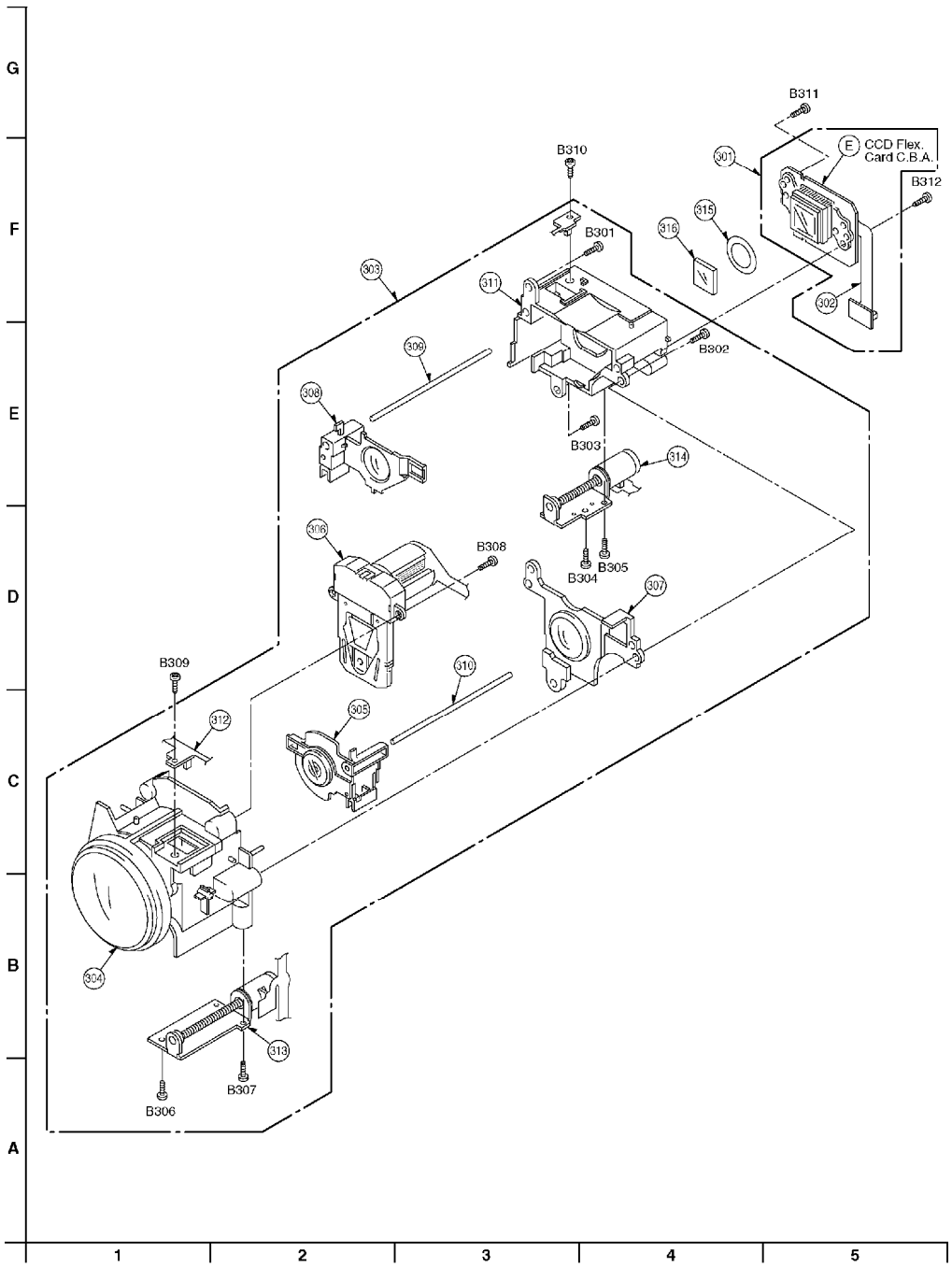
13.2. FRAME & CASING SECTION (2)



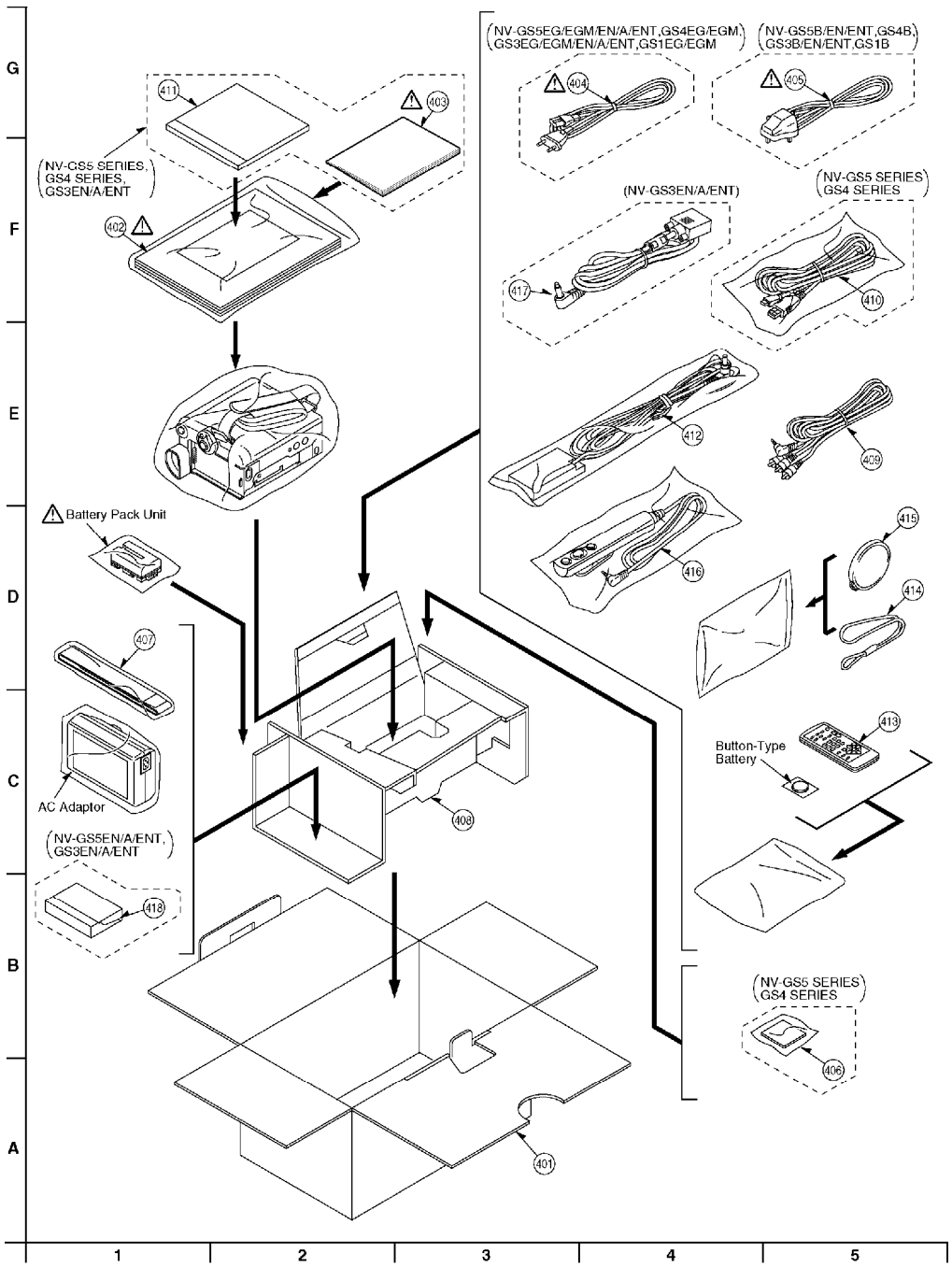
13.3. LCD SECTION



13.4. CAMERA LENS SECTION



13.5. PACKING PARTS & ACCESSORIES SECTION



14. REPLACEMENT PARTS LIST

14.1. FRAME & CASING SECTION (1) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
1	VKF3522	EVR COVER	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
1	VKF3553	EVR COVER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
2	VWJ1544	FRONT FLEX.	
3	VKM5864	SIDE CASE (R)	NV-GS5EG/EGM/B/EN/A/ENT
3	VKM5888	SIDE CASE (R)	NV-GS4EG/EGM/B
3	VKM5865	SIDE CASE (R)	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
4	VKF3521	SD LID	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
5	VMS7094	SD LID SHAFT	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
6	VMB3598	SD LID SPRING	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
7	VGL0983	SD PANEL LIGHT	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
8	VGU9050	MODE SELECT KNOB	NV-GS5EG/EGM/B/EN/A/ENT
8	VGU9113	MODE SELECT KNOB	NV-GS4EG/EGM/B
9	VMP7095	LENS FRAME (R)	
10	VMP7216	HINGE EARTH PLATE	
11	VEK9634	VTR OPERATION FLEX. U.	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
11	VEK9635	VTR OPERATION FLEX. U.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
14	VMG1405	CUSHION RUBBER	
17	VGQ6734	LENS FLEX. BARRIER	
18	VGQ6559	LCD HOLDING PIECE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
19	VGQ6560	LCD MASK	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
20	VGQ6561	EVF LCD PROTECT PANEL	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
20	VGQ6663	EVF LCD PROTECT PANEL	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
21	VGQ6564	PROTECT PANEL SHEET	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
22	VGQ6563	SLIDE CASE	
23	VGU9051	VIEW ADJ. KNOB	
24	VML3666	VIEW ADJ. LEVER	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
24	VML3681	VIEW ADJ. LEVER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
25	VGQ6636	VIEW ADJ. BASE	
26	VGQ6566	SLIDE CASE HOLDER	
28	VWJ1546	EVF FLEX.	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
29	L5BDDXH00006	EVF LCD PANEL	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
30	VGQ6570	EVF LCD FIXATION TAPE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
31	VGQ6570	EVF LCD FIXATION TAPE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
32	VGQ6558	EVF LCD PRESS PIECE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
33	LSFL0040	LED DIFFUSION SHEET	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT

Ref. No.	Part No.	Part Name & Description	Remarks
34	VMC1774	EVF CLICK SPRING	
35	VMP7100	EVF FRAME	
36	LSFL0039	LED LENS	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
37	VGQ6740	EVF BARRIER	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
38	VYK0F38	REAR CASE U.	
45	VWJ1543	BUS FLEX.	
46	VYK0E94	EVF VIEW ADJ. U.	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
46	VYK0G09	EVF VIEW ADJ. U.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
47	VMG1432	EYE CAP	
48	VYK0F22	FRONT CASE	
54	VYK0F23	FRONT DECORATION U.	
55	VKA0319	SLIDE PROOF RUBBER	
56	VMP7217	FRONT EARTH PLATE	
57	VYK0E93	MIC NET U.	
58	VGK2780	LENS DECORATION	
59	VDW0791	FRONT SCREW	
60	VGH4541	FRONT NAME PLATE	
61	VMG1431	FRONT CUSHION RUBBER	
62	VYQ2370	LENS HOOD U.	
63	VEK9630	MIC U.	
65	VMP7170	FRONT EARTH ANGLE (LOWER)	
66	VGQ6711	MIC CUSHION	
67	VGQ6737	FRONT PROTECT SHEET (A)	
68	VGQ6738	FRONT PROTECT SHEET (B)	
69	VGQ6739	FRONT PROTECT SHEET (C)	
70	VMP7101	SHOE HOLD PLATE	
71	VGQ6780	FLEX. SHEET	
73	VGQ6438	B/W EVF MASK	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
74	VGQ6462	B/W EVF FLEX. FIXATION TAPE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
75	VGQ6657	BL DIFFUSION PLATE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
76	VGQ6658	BL POLARIZATION PLATE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
77	VGQ6659	BL HOLDER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
78	VGQ6660	B/W EVF FIXATION TAPE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
79	VGQ6661	B/W EVF LCD PANEL HOLDER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
80	VGQ6662	B/W EVF LCD HOLDING PIECE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
81	VGQ6775	B/W EVF BARRIER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
82	L5BDAXG00003	B/W EVF LCD PANEL	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
83	VWJ1564	B/W EVF FLEX.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
B1	XQN16+BJ35FZ	SCREW	
B2	XQN16+BJ35FZ	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B3	XQN16+BJ35FZ	SCREW	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
B4	XQN16+BJ35FZ	SCREW	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
B5	XQN16+BJ35FZ	SCREW	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
B6	XQN16+BJ3FN	SCREW	
B7	VHD0768	SCREW	
B8	VHD0768	SCREW	
B9	VHD1303	SCREW	
B10	VHD1303	SCREW	
B11	VHD1393	SCREW	
B12	VHD1393	SCREW	
B14	XQN16+B3FZ	SCREW	
B15	XQN16+B3FZ	SCREW	
B16	XQN16+BJ3FZ	SCREW	
B17	XQN16+BJ4FZ	SCREW	
B18	XQN16+BJ4FZ	SCREW	
B19	XQN16+BJ4FZ	SCREW	
B20	XQN16+BJ3	SCREW	
B21	XQS2+A4FN	SCREW	
B22	XQS2+A4FN	SCREW	
B23	XQS2+A4FN	SCREW	
B24	XQN16+B2FN	SCREW	
B25	XQN16+B3FZ	SCREW	
B26	XQN16+B3FZ	SCREW	
B27	XQN16+B5FZ	SCREW	
B28	XQN16+B6FZ	SCREW	
B29	XQN16+BJ6FN	SCREW	
B30	XQN16+BJ6FN	SCREW	
B31	XQN16+B4FZ	SCREW	
B32	XQN16+B4FZ	SCREW	
B33	XQN16+B3FZ	SCREW	
B34	XQN16+B3FZ	SCREW	
B35	XQN16+BJ4FZ	SCREW	
B36	XQN16+BJ4FZ	SCREW	
B37	XQN16+BJ4FZ	SCREW	

14.2. FRAME & CASING SECTION (2) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
101	VMZ3213	BARRIER	NV-GS3EN/A/ENT,NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
104	VYK0E81	MECHA. FRAME U.	
105	VGQ6635	MECHA. FLEX. HOLD PIECE	
106	VMP7098	LENS FRAME (L)	
107	VYK0E96	CASSETTE COVER U. (TOP)	
112	VGP5720	CASSETTE COVER (SIDE)	
113	VGU9054	RESET BUTTON	
115	ML920S/F9D	LITHIUM BATTERY	
116	VWJ1548	SIDE L FLEX.	
117	VGQ5908	SPEAKER SHEET	
118	VGQ6571	GRIP FLEX. HOLD PIECE	
119	VGQ6572	BATTERY PROTECT SHEET	
120	VGQ6580	SIDE L INSULATION SHEET	
121	VMP7107	CASSETTE PLATE	
122	L0AA02A00036	SPEAKER U.	
123	VYK0F33	SIDE CASE (L) U.	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
123	VYK0F66	SIDE CASE (L) U.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
124	VGH4553	JACK NAME PLATE	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
124	VGH4565	JACK NAME PLATE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
125	VKF3523	JACK COVER (L)	
126	VMP7189	GRIP BELT ANGLE (L)	
127	VMP7099	TRIPOD PLATE	
128	VGQ6638	TRIPOD PIECE	
129	VGU9098	CASSETTE DOOR LOCK BUTTON	
130	VYQ2369	MAIN FRAME U.	
135	N9ZZ00000142	REAR OPERATION U.	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
135	N9ZZ00000143	REAR OPERATION U.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
136	VMP7103	SHOULDER BELT ANGLE	
137	VMP7143	GRIP BELT ANGLE (REAR)	
138	VYC0880	GRIP BELT U.	
139	VGQ6639	GRIP BELT PIECE	
140	VMP7142	GRIP BELT FIXATION ANGLE	
142	VWJ1547	JACK FLEX.	
143	VWJ1549	SUB FLEX.	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
144	VGQ6741	MECHA. PROTECT BARRIER	
145	VXY1710	MECHA. UNIT	
B101	XQN16+BJ35FZ	SCREW	
B102	XQN16+BJ35FZ	SCREW	
B109	XQN2+B3	SCREW	
B110	XQN16+BJ4	SCREW	
B111	XQN16+BJ4	SCREW	
B112	XQN16+BJ5FZ	SCREW	
B113	XQN16+BJ5FZ	SCREW	
B114	XQN16+B2FN	SCREW	
B115	VHD1532	SCREW	
B116	XQN16+B3FZ	SCREW	

Ref. No.	Part No.	Part Name & Description	Remarks
B117	XQN16+B3FZ	SCREW	
B118	XQN16+B3FZ	SCREW	
B119	XQN16+B3FZ	SCREW	
B120	XQN16+B3FZ	SCREW	
B121	XQN16+B3FZ	SCREW	
B122	XQN16+B3FZ	SCREW	
B123	XQN16+B3FZ	SCREW	
B124	XQN16+B3FZ	SCREW	
B125	XQN16+B3FZ	SCREW	
B126	XQN16+BJ5FZ	SCREW	
B127	VHD1533	SCREW	
B128	VHD1533	SCREW	
B129	VHD1133	SCREW	
B130	VHD1133	SCREW	
B131	VHD1133	SCREW	
B132	XQN16+B2FN	SCREW	
B133	XQN16+B2FN	SCREW	
B134	XQN16+B2FN	SCREW	
B135	XQN16+B2FN	SCREW	
B136	XQN16+B2FN	SCREW	
B137	XQN16+BJ4	SCREW	
B138	XQN16+B3FZ	SCREW	

14.3. LCD SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
201	VYK0F29	LCD CASE (UPPER) U.	NV-GS5EG/EGM/B
201	VYK0G22	LCD CASE (UPPER) U.	NV-GS5EN/A/ENT
201	VYK0G08	LCD CASE (UPPER) U.	NV-GS4EG/EGM/B
201	VYK0F28	LCD CASE (UPPER) U.	NV-GS3EG/EGM/B
201	VYK0G26	LCD CASE (UPPER) U.	NV-GS3EN/A/ENT
201	VYK0F63	LCD CASE (UPPER) U.	NV-GS1EG/EGM/B
202	VGQ6557	LCD LOCK PIECE	
203	VMP7094	LCD LOCK PLATE	
204	VMB3600	LCD LOCK SPRING	
205	VKM5851	LCD CASE (LOWER)	
206	VXD0362	LCD HINGE U.	
207	VYK0F26	BACKLIGHT U.	
208	EDTCA29QJ0	LCD PANEL U.	
209	VMP7093	LCD FRAME	
210	VSC5332	LCDÅ@SHIELD CASE	
211	VGQ6779	LCD SHEET	
212	VGL0991	DIFFUSION SHEET	
213	VGQ4758	PROTECT SHEET	
215	VGQ5507	FLEX. FIXTATION TAPE	
216	VGQ6671	LCD PANEL FIXATION TAPE A	
217	VGQ6671	LCD PANEL FIXATION TAPE A	
218	VGQ6672	LCD PANEL FIXATION TAPE B	
219	VJB06E80	HALL SENSOR FLEX.	

Ref. No.	Part No.	Part Name & Description	Remarks
B201	XQS16+AJ3	SCREW	
B202	VHD1459	SCREW	
B203	VHD1459	SCREW	
B204	XQN16+B25FN	SCREW	
B205	XQN16+B25FN	SCREW	

14.4. CAMERA LENS SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
301	VEK9557	CCD U	
302	VJB22325	CCD FLEX.	
303	VXW0522	LENS U.	
304	VXQ1041	LENS MAIN FRAME U.	
305	VXP2155	2ND MOVING FRAME U.	
306	L9ZZ00000189	IRIS U.	
307	VXQ1042	3RD MOVING FRAME U.	
308	VXP2157	4TH MOVING FRAME U.	
309	VMS7082	GUIDE POLE	
310	VMS7082	GUIDE POLE	
311	VDW0784	MASTER FLANGE U.	
312	VEK9403	LENS FLEX. U.	
313	L6HA68ZC0001	ZOOM MOTOR U.	
314	L6HA68ZC0002	FOCUS MOTOR U.	
315	VMX3070	CCD CUSHION	
316	VDL1260	CRYSTAL FILTER	
B301	XQN16+CJ8	SCREW	
B302	XQN16+CJ8	SCREW	
B303	XQN16+CJ8	SCREW	
B304	XQN16+CJ4FY	SCREW	
B305	XQN16+CJ4FY	SCREW	
B306	XQN16+CJ4FY	SCREW	
B307	XQN16+CJ4FY	SCREW	
B308	XQN16+CJ5	SCREW	
B309	XQN16+CJ4FY	SCREW	
B310	XQN16+CJ4FY	SCREW	
B311	XQN16+CJ4FY	SCREW	
B312	XQN16+CJ4FY	SCREW	

14.5. PACKING PARTS & ACCESSORIES SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
401	VPG0N68	PACKING	NV-GS5EG
401	VPG0N69	PACKING	NV-GS5EGM
401	VPG0Q20	PACKING	NV-GS5B
401	VPG0N71	PACKING	NV-GS5EN/A/ENT
401	VPG0N90	PACKING	NV-GS4EG
401	VPG0N91	PACKING	NV-GS4EGM
401	VPG0N92	PACKING	NV-GS4B
401	VPG0N74	PACKING	NV-GS3EG
401	VPG0N75	PACKING	NV-GS3EGM
401	VPG0N76	PACKING	NV-GS3B
401	VPG0N77	PACKING	NV-GS3EN/A/ENT
401	VPG0N79	PACKING	NV-GS1EG
401	VPG0N80	PACKING	NV-GS1EGM
401	VPG0N81	PACKING	NV-GS1B
402	VQT9668	OPERATING INSTRUCTIONS (GERMAN,FRENCH,ITALIAN,DUTCH)	⚠ NV-GS1EG,NV-GS3EG,NV-G GS5EG
402	VQT9669	OPERATING INSTRUCTIONS (PORTUGUESE,SPANISH,SWEDISH,DANISH)	⚠ NV-GS1EGM,NV-GS3EGM,N GS4EGM,NV-GS5EGM,
402	VQT9670	OPERATING INSTRUCTIONS (ENGLISH)	⚠ NV-GS1B,NV-GS3B,NV-GS4
402	VQT9671	OPERATING INSTRUCTIONS (CHINESE,ENGLISH,RUSSIAN,ARABIC)	⚠ NV-GS3EN/ENT,NV-GS5EN/
402	VQT9795	OPERATING INSTRUCTIONS (ENGLISH)	⚠ NV-GS3A,NV-GS5A
403	VQT9833	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (GERMAN,FRENCH,ITALIAN,DUTCH)	⚠ NV-GS5EG
403	VQT9834	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (PORTUGUESE,SPANISH,SWEDISH,DANISH)	⚠ NV-GS5EGM
403	VQT9835	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (ENGLISH)	⚠ NV-GS5B/A
403	VQT9836	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (CHINESE,ENGLISH,RUSSIAN,ARABIC)	⚠ NV-GS5EN/ENT
403	VQT9830	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (GERMAN,FRENCH,ITALIAN,DUTCH)	⚠ NV-GS4EG
403	VQT9831	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (PORTUGUESE,SPANISH,SWEDISH,DANISH)	⚠ NV-GS4EGM
403	VQT9832	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (ENGLISH)	⚠ NV-GS4B
403	VQT9828	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (CHINESE,ENGLISH,RUSSIAN,ARABIC)	⚠ NV-GS3EN/ENT
403	VQT9829	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (ENGLISH)	⚠ NV-GS3A
404	K2CR2DA00004	AC CORD	⚠ NV-GS1EG/EGM,NV-GS3EG ENT,NV-GS4EG/EGM,NV-GS5EG ENT
404	K2CJ2DA00002	AC CORD	⚠ NV-GS3A,NV-GS5A
405	VJA0940	AC CORD	⚠ NV-GS1B,NV-GS3B/EN/ENT GS4B,NV-GS5B/EN/ENT
406	RP-SD008BVE0	SD CARD	NV-GS4EG/EGM/B,NV-GS5EG/E ENT
407	VFC3506-1A	SHOULDER BELT	

Ref. No.	Part No.	Part Name & Description	Remarks
408	VPN5715	CUSHION	
409	K2KC4CB00002	AV CABLE	
410	VFA0363	USB CABLE	NV-GS4EG/EGM/B,NV-GS5EG/E ENT
411	VFF0155-S	CD-ROM FOR PC KIT	NV-GS5EG/EGM/B/EN/A/ENT
411	VFF0154-S	CD-ROM FOR PC KIT	NV-GS4EG/EGM/B
411	VFF0153-S	CD-ROM FOR PC KIT	NV-GS3EN/A/ENT
412	K2GJ2DZ00014	DC CABLE	
413	N2QAEC000003	REMOTE CONTROLLER	
414	VGQ5327	HOOD STRAP	
415	VYF2841	HOOD CAP U.	
416	N2QCAD000001	UNIVERSAL REMOTE CONTROLLER	
417	K1V208A10002	INTERFACE CABLE	NV-GS3EN/A/ENT
418	VFK1451	HEAD CLEANING CASSETTE	NV-GS3EN/A/ENT,NV-GS5EN/A/

14.6. ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE: Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=uuF.
4. The P.C. Board units marked width "■" show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP03G17E	MAIN C.B.A.	(RTL)NV-GS1EG/EGM/B
■	VEP03G17D	MAIN C.B.A.	(RTL)NV-GS3EG/EGM/B
■	VEP03G17C	MAIN C.B.A.	(RTL)NV-GS3EN/A/ENT
■	VEP03G17F	MAIN C.B.A.	(RTL)NV-GS4EG/EGM/B
■	VEP03G17B	MAIN C.B.A.	(RTL)NV-GS5EG/EGM/B/EN/A/ENT
■	VEP03G18C	SUB C.B.A.	(RTL)NV-GS3EN/A/ENT
■	VEP03G19D	SUB C.B.A.	(RTL)NV-GS4EG/EGM/B
■	VEP03G18B	SUB C.B.A.	(RTL)NV-GS5EG/EGM/B/EN/A/ENT
■	VEP22325	CCD FLEX. CARD U.	(RTL)
■	VEP06E78A	SIDE (L) C.B.A.	(RTL)
■	VEP04805C	JACK C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/ EGM/B/EN/A/ENT
■	VEP04805B	JACK C.B.A.	(RTL)NV-GS4EG/EGM/B,NV-GS5EG/ EGM/B/EN/A/ENT
■	VEK9632	SIDE (R) C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/ EGM/B/EN/A/ENT
■	VEK9631	SIDE (R) C.B.A.	(RTL)NV-GS4EG/EGM/B,NV-GS5EG/ EGM/B/EN/A/ENT
■	VEP000X4B	R FLEX. UNIT	(RTL)NV-GS4EG/EGM/B
■	VEP000X4A	R FLEX. UNIT	(RTL)NV-GS5EG/EGM/B/EN/A/ENT
■	VEP26274B	MONITOR C.B.A.	(RTL)
■	VEP28295A	B/W EVF C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/ EGM/B,NV-GS4EG/EGM/B
■	VEP28293A	EVF C.B.A.	(RTL)NV-GS3EN/A/ENT,NV-GS5EG/EGM /B/EN/A/ENT
■	VEP04804A	FRONT C.B.A.	(RTL)

Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP22325	CCD FLEX. CARD U.	(RTL)
C294	ECUV1C105KBN	C.CAPACITOR CH 16V 1U	F1J1C105A091
C295	ECUV1E104KBN	C.CAPACITOR CH 25V 0.1U	F1J1E1040007
R292	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	
D291	MA143	DIODE	
Q291	2SC3930	CHIP TRANSISTOR	
	VJS3537A014G	CONNECTOR (FEMALE) 14P	K1MN14A00039
■	VEP06E78A	SIDE (L) C.B.A.	(RTL)
B6101	ML920S/F9D	LITHIUM BATTERY	
C2601	ECUX1H060DCV	C.CAPACITOR CH 50V 6P	
C2602	ECUX1H060DCV	C.CAPACITOR CH 50V 6P	
C2603	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K
C6304	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	
D6301	MA133	DIODE	MA3S133
FP6301	K1MN21B00036	CONNECTOR	
FP6302	VJS4298B008	CONNECTOR (FEMALE) 8P	K1MN08B00048
IC2601	S3514AEFSTB	IC	C1ZBZ0001483
R6301	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	
R6302	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
S6302	VSP1102	SWITCH	K0H1BA000260
VZ6301	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
X2601	VSX0601	CRYSTAL OSCILLATOR	H0J327200051
.	VWJ1548	SIDE L FPC	
■	VEP04805C	JACK C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
■	VEP04805B	JACK C.B.A.	(RTL)NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C2501	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	ECJ1XB1C473K
C2502	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K
C2503	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K
C2504	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K
C2506	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K

Ref. No.	Part No.	Part Name & Description	Remarks
C2507	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C2508	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C2509	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C2510	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C2511	ECST0JY106ZR	T.CAPACITOR CH 6.3V 10U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT ECST0JY106R
C2511	F3F0J4760002	TANTALUM CAPACITOR	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C2512	ECUV0J475KBN	C.CAPACITOR CH 6.3V 4.7U	F1J0J4750004
C3901	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C3902	ECUV0J475KBN	C.CAPACITOR CH 6.3V 4.7U	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT F1J0J4750004
C3903	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C3904	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C3905	ECUX1H050CCQ	C.CAPACITOR CH 50V 5P	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C4001	ECUX1E472KBQ	C.CAPACITOR CH 25V 4700P	
C4002	ECUX1E472KBQ	C.CAPACITOR CH 25V 4700P	
C4901	ECUX1E222KBQ	C.CAPACITOR CH 25V 2200P	
C4902	ECUX1E222KBQ	C.CAPACITOR CH 25V 2200P	
C4903	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4904	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4905	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C4906	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C4908	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4910	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C4911	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4912	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
D2501	MA2S728	DIODE	
D4901	MA2SD2400L	DIODE	
FP6201	K1MN39B00004	CONNECTOR	
FP6202	VJS3320D010	CONNECTOR (FEMALE) 10P	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT K1MN10B00042
HS3401	K1NA09E00017	K1NA09E00017	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
IC2501	C0ZBZ0000540	IC	
IC2502	C0CBCBC00037		
IC2503	NJM2407R	IC	C0BZBB000001
JK2501	VJJ0580	JACK (4P)	
JK2502	K2HZ108B0004	8-PIN JACK	
JK3801	K2YZ04000016	JACK	
JK4001	K2HC107B0002	JACK	
JK4901	K2HC103B0137	JACK	
L2501	VLQ0855M4R7	COIL 4.7UH	G1C4R7M00016
L2502	VLQ0911K100	COIL 10UH	G1C100K00019

Ref. No.	Part No.	Part Name & Description	Remarks
LB2501	J0JAC0000014	FILTER	J0JAC0000016
LB2502	J0JAC0000014	FILTER	J0JAC0000016
LB2503	VLF1143A102	COIL 1000UH	J0JBC0000026
LB2504	VLF1143A102	COIL 1000UH	J0JBC0000026
LB2505	J0JAC0000014	FILTER	J0JAC0000016
LB2506	J0JHC0000032	FILTER	
LB2507	J0JAC0000014	FILTER	J0JAC0000016
LB2508	J0JAC0000014	FILTER	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT J0JAC0000016
LB2509	J0JAC0000014	FILTER	J0JAC0000016
LB4001	VLP0329A121	CHIP BEAD	
LB4003	J0JAC0000014	FILTER	J0JAC0000016
LB4005	J0JAC0000014	FILTER	J0JAC0000016
LB4006	J0JAC0000014	FILTER	J0JAC0000016
LB4007	J0JAC0000014	FILTER	J0JAC0000016
LB4008	J0JAC0000014	FILTER	J0JAC0000016
LB4921	J0JAC0000014	FILTER	J0JAC0000016
LB4925	VLP0329A241	COIL	
LB4926	VLP0329A241	COIL	
LB4927	J0JHC0000032	FILTER	
Q4901	2SD2216	TRANSISTOR	2SD22160R
Q4902	2SB1462-R	TRANSISTOR	2SB14620R
Q4903	2SD2216	TRANSISTOR	2SD22160R
Q4904	2SB1462-R	TRANSISTOR	2SB14620R
Q4907	B1ABBE000002	TRANSISTOR	
QR2501	RN1706R	TRANSISTOR-RESISTOR	B1GFCFGN0004
QR4901	UN9113	TRANSISTOR-RESISTOR	UNR9113
R2507	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R2508	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R2509	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	ERJ2GEJ272X
R2510	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	ERJ2GEJ272X
R2511	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	
R2512	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R2513	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	
R2514	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	
R2515	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R2516	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R2517	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R2518	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	
R2519	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	
R2520	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	
R3901	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R3902	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R3903	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3904	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3905	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3906	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	

Ref. No.	Part No.	Part Name & Description	Remarks
R3908	ERJ2GEJ331X	M.RESISTOR CH 1/16W 330	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT ERJ2RMJ331X
R3909	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT ERJ2RMJ220X
R3910	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R3911	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3912	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT ERJ2RMJ220X
R3913	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT ERJ2RMJ472X
R4001	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	
R4002	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	
R4003	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R4901	ERJ2GEJ682X	M.RESISTOR CH 1/16W 6.8K	ERJ2RMJ682X
R4902	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R4903	ERJ2GEJ682X	M.RESISTOR CH 1/16W 6.8K	ERJ2RMJ682X
R4905	ERJ2GEJ471X	M.RESISTOR CH 1/16W 470	ERJ2RMJ471X
R4906	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4907	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	
R4908	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	
R4909	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R4910	ERJ2GEJ562X	M.RESISTOR CH 1/16W 5.6K	
R4911	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	ERJ2GEJ151X
R4912	ERJ2GEJ471X	M.RESISTOR CH 1/16W 470	ERJ2RMJ471X
R4913	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4914	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	
R4915	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	
R4916	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R4917	ERJ2GEJ562X	M.RESISTOR CH 1/16W 5.6K	
R4918	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	ERJ2GEJ151X
VZ2501	D4ED1120A002	TRANSIENT/SURGE ABSORBER	
VZ2502	D4ED1220A006	TRANSIENT/SURGE ABSORBER	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
VZ4001	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
VZ4002	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
VZ4901	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
.	VWJ1547	JACK FPC	
.	VGQ6781	JACK BARRIER	
.	VWJ1549	SUB FPC	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
■	VEK9632	SIDE (R) C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
■	VEK9631	SIDE (R) C.B.A.	(RTL)NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
FP6601	VJS4273B008	CONNECTOR (FEMALE) 8P	
FP6602	VJS3931B006	CONNECTOR (FEMALE) 6P	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT K1MN06B00056

Ref. No.	Part No.	Part Name & Description	Remarks
S6701	K0L1BA000071	SWITCH	
■	VEP000X4B	R FLEX. UNIT	(RTL)NV-GS4EG/EGM/B
■	VEP000X4A	R FLEX. UNIT	(RTL)NV-GS5EG/EGM/B/EN/A/ENT
D6101	B3AAB0000129	LED	
S6101	VSS0348	POWER SWITCH	NV-GS4EG/EGM/B K0D113B00026
S6101	VSS0547	POWER SWITCH	NV-GS5EG/EGM/B/EN/A/ENT K0D113B00027
■	VEP26274B	MONITOR C.B.A.	(RTL)
C902	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C903	ECST0JY106ZR	T.CAPACITOR CH 6.3V 10U	ECST0JY106R
C906	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	
C907	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C908	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C909	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C910	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C911	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	
C913	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	
C916	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C917	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C918	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C921	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C927	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C929	ECUX1E152KBQ	C.CAPACITOR CH 25V 1500P	
C931	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C932	ECUM1E105KBM	C.CAPACITOR CH 25V 1U	
C934	ECUV1C105KBN	C.CAPACITOR CH 16V 1U	F1J1C105A091
C935	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C937	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C938	ECUX1H101JCQ	C.CAPACITOR CH 50V 100P	
C939	ECUX1H331GCV	C.CAPACITOR CH 50V 330P	
C940	ECUX1H560JCQ	C.CAPACITOR CH 50V 56P	
C941	ECUX1H100CCQ	C.CAPACITOR CH 50V 10P	
C942	ECUX1C474KBN	C.CAPACITOR CH 16V 0.47U	ECJ2YB1C474K
C943	ECUX1A224KBV	C.CAPACITOR CH 10V 0.22U	
C944	ECUX1A224KBV	C.CAPACITOR CH 10V 0.22U	
C945	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C946	ECUM1C106VB	C.CAPACITOR CH 16V 10U	
C947	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C948	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C950	ECUV1C105KBN	C.CAPACITOR CH 16V 1U	F1J1C105A091
C952	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C953	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
D903	MA132WA	DIODE	MA3S132D

Ref. No.	Part No.	Part Name & Description	Remarks
D904	MA159A	DIODE	MA4X159A
D905	HN2D01FUR	SWITCHING DIODE	B0ADDJ000011
D906	MA111	DIODE	MA2J111
FP901	VJS3320B024	CONNECTOR (FEMALE) 24P	K1MN24B00036
FP903	K1MN25B00045	CONNECTOR	
IC901	AN2540FHQ-V	IC	
IC902	TC4W53FU	IC	C0JBAR000226
IC903	C0CBCBC00029	IC	
IC908	SN74LV04APW	IC	C0JBAB000247
IC991	DN8797MS	HALL IC	
L901	VLQ0807K100	COIL 10UH	G1C100K00024
Q901	HN1C01FUYR	TRANSISTOR	B1HBCFA00001
Q902	2SK2159	TRANSISTOR	
Q903	B1HFCFA00015	TRANSISTOR ARRAY	
Q905	B1HFCFA00015	TRANSISTOR ARRAY	
QR901	UN9210	TRANSISTOR-RESISTOR	
QR902	UN9214J	TRANSISTOR-RESISTOR	
QR903	UN9214J	TRANSISTOR-RESISTOR	
QR904	UN9210	TRANSISTOR-RESISTOR	
R903	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R904	ERJ3RBD622	M.RESISTOR CH 1/16W 6.2K	
R908	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R909	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R910	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R912	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	D0GB334JA002
R914	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	ERJ3GEYJ104A
R915	ERJ3RBD333V	M.RESISTOR CH 1/16W 33K	
R917	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	
R918	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	
R921	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R924	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	
R925	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R926	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R927	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R928	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R929	ERJ3GEYJ220V	M.RESISTOR CH 1/16W 22	
R931	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R932	ERJ3RBD203V	M.RESISTOR CH 1/16W 20K	
R934	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	ERJ3GEYJ103A
R936	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	ERJ3GEYJ473A
R946	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R947	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R951	ERJ3GEYJ560V	M.RESISTOR CH 1/16W 56	
R952	ERJ3GEYJ472A	M.RESISTOR CH 1/16W 4.7K	
R953	ERJ3GEYJ823V	M.RESISTOR CH 1/16W 82K	D0GB823JA002
R956	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	
R957	ERJ3RBD101	M.RESISTOR CH 1/16W 100	ERJ3RBD101V
R958	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	

Ref. No.	Part No.	Part Name & Description	Remarks
R960	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R962	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	ERJ3GEYJ561A
R963	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	ERJ3GEYJ104A
R964	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R965	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R966	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	
R967	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	ERJ3GEYJ104A
R968	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R969	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R970	ERJ3GEYJ562V	M.RESISTOR CH 1/16W 5.6K	D0GB562JA002
R971	ERJ3GEYJ335V	M.RESISTOR CH 1/16W 3.3M	
R972	ERJ3GEYJ224V	M.RESISTOR CH 1/16W 220K	D0GB224JA002
R973	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	
R974	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	
R975	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	
R976	ERJ3RBD621	M.RESISTOR CH 1/16W 620	
R977	ERJ3RED200	M.RESISTOR CH 1/16W 20	
R978	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	
R979	ERJ3GEYJ224V	M.RESISTOR CH 1/16W 220K	D0GB224JA002
R980	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R983	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R988	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R989	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	ERJ3GEYJ104A
T901	ETJ09K59AZ	CHIP TRANSFORMER	
T902	EFTU21R204	TRANSFORMER	
■	VEP28295A	B/W EVF C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
■	VEP28293A	EVF C.B.A.	(RTL)NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
C801	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C802	ECUV1A335KBN	C.CAPACITOR CH 10V 3.3U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B F1J1A335A005
C803	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C804	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C805	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C806	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C808	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C810	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B ECJ1XB1C104K
C814	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C815	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C816	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B

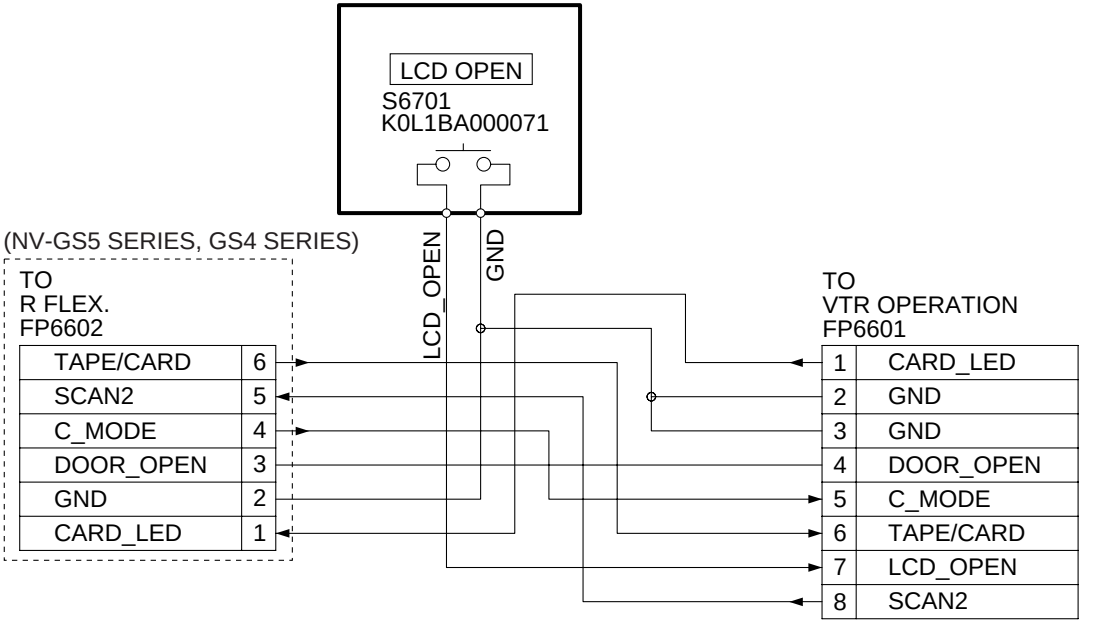
Ref. No.	Part No.	Part Name & Description	Remarks
C817	ECUX1C223KBQ	C.CAPACITOR CH 16V 0.022U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C818	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C819	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C820	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B ECJ1XB1C104K
D801	B3AFB0000016	LED (WHITE)	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B B3AFB0000018
D801	B3AFB0000027	LED	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
D802	02DZ6.2YTPH3	DIODE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B B0BC6R100014
D803	02DZ6.2YTPH3	DIODE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT B0BC6R100014
D804	MA133	DIODE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT MA3S133
FP801	K1MN08A00023	CONNECTOR	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
FP801	VJS3931B016	CONNECTOR (FEMALE) 16P	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
FP802	VJS4365B020	CONNECTOR (FEMALE) 20P	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
FP802	K1MN16B00091	CONNECTOR	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
IC801	C0HBA0000070	IC	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
Q801	B1ABBE000002	TRANSISTOR	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
R801	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B D0GBR00JA017
R801	ERJ3GEYJ472A	M.RESISTOR CH 1/16W 4.7K	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
R802	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R803	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R804	ERJ3RBD333V	M.RESISTOR CH 1/16W 33K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R804	ERJ3RED820	M.RESISTOR CH 1/16W 82	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
R805	ERJ3GEYJ112V	M.RESISTOR CH 1/16W 1.1K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R806	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R807	ERJ3GEYJ122V	M.RESISTOR CH 1/16W 1.2K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R810	ERJ3GEYJ121V	M.RESISTOR CH 1/16W 120	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
■	VEP04804A	FRONT C.B.A.	(RTL)

Ref. No.	Part No.	Part Name & Description	Remarks
C491	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C492	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	
C4801	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4802	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4803	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C4804	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C4805	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4806	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4807	ECUV0J475KBN	C.CAPACITOR CH 6.3V 4.7U	F1J0J4750004
C4808	F3F0J4760002	TANTALUM CAPACITOR	
C4811	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4812	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C6401	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C6402	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
D491	MA132WA	DIODE	MA3S132D
D6801	B3AAB0000129	LED	
D6802	PH310	DIODE	B3GA00000001
FP4801	VJS4322A014	CONNECTOR (FEMALE) 14P	
FP4802	VJS3320D005	CONNECTOR (FEMALE) 5P	K1MN05B00028
IC4801	NJM2115VA	IC	C0ABBB000106
IR6401	PNA4618M05VT	REMOCON	
JK3001	K2HZ104D0001	S-JACK	
LB3961	VLP0329A121	CHIP BEAD	
LB3963	VLP0329A121	CHIP BEAD	
Q491	2SD1030	TRANSISTOR	
Q492	2SD1819A-R	TRANSISTOR	2SD1819AR
Q4803	2SD1819A	TRANSISTOR	2SD1819AW
R491	ERJ2GEJ225X	M.RESISTOR CH 1/16W 2.2M	ERJ2RMJ225X
R492	ERJ2GEJ334X	M.RESISTOR CH 1/16W 330K	ERJ2RMJ334X
R493	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R494	ERJ2GEJ182	M.RESISTOR CH 1/16W 1.8K	ERJ2GEJ182X
R495	ERJ3GEYJ106V	M.RESISTOR CH 1/16W 10M	
R3960	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3961	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R4801	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R4802	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R4803	ERJ2GEJ683X	M.RESISTOR CH 1/16W 68K	ERJ2RMJ683X
R4804	ERJ2GEJ683X	M.RESISTOR CH 1/16W 68K	ERJ2RMJ683X
R4805	ERJ2GEJ394X	M.RESISTOR CH 1/16W 390K	ERJ2RMJ394X
R4806	ERJ2GEJ394X	M.RESISTOR CH 1/16W 390K	ERJ2RMJ394X
R4813	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	
R4814	ERJ2GEJ333X	M.RESISTOR CH 1/16W 33K	ERJ2RMJ333X
R4815	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R6401	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R6402	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	
R6403	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	

Ref. No.	Part No.	Part Name & Description	Remarks
R6803	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	
VZ3952	D4ED1120A002	TRANSIENT/SURGE ABSORBER	
VZ6401	D4ED1270A008	TRANSIENT/SURGE ABSORBER	
VZ6402	D4ED1270A008	TRANSIENT/SURGE ABSORBER	

15. Schematic Diagram for printing with A4 size

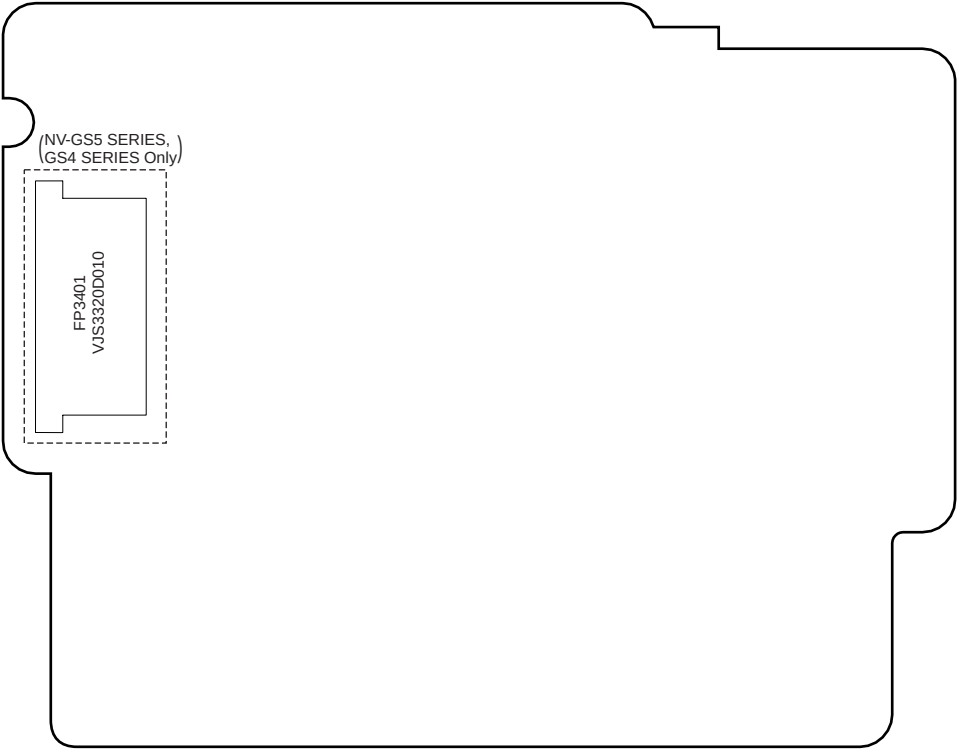
(SIDE R C.B.A.)



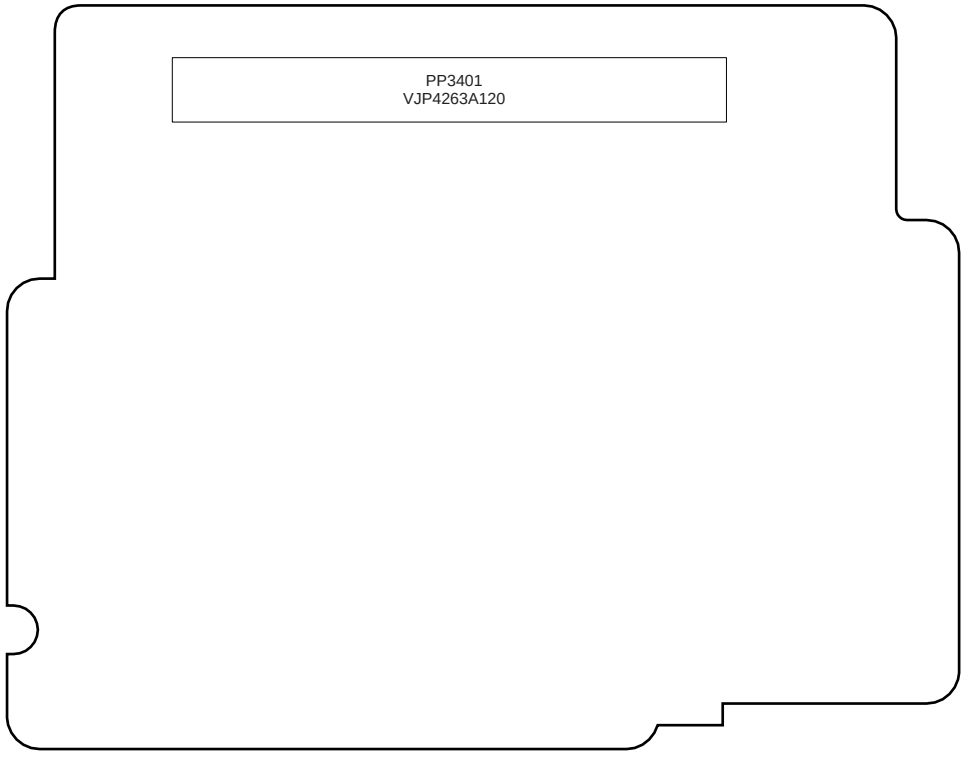
NV-GS5, GS4, GS3, GS1
SIDE (R) SCHEMATIC DIAGRAM

C B A

1 2 3 4

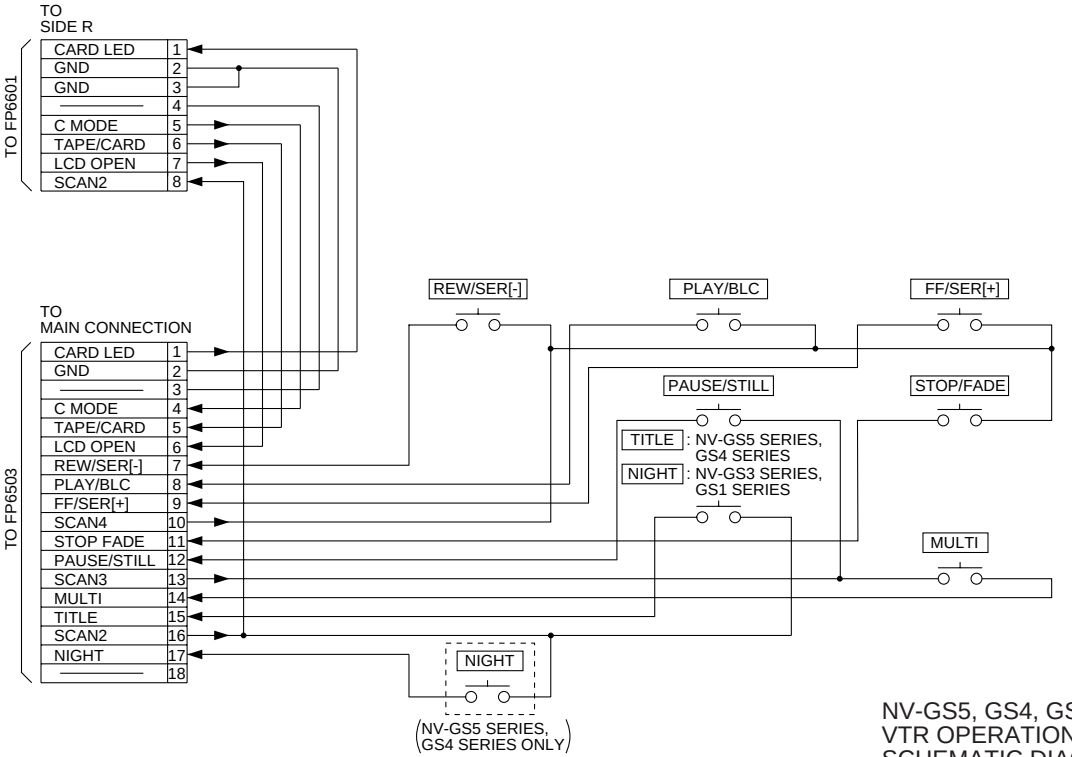


(COMPONENT SIDE)



(FOIL SIDE)

(VTR OPERATION FLEX. UNIT)

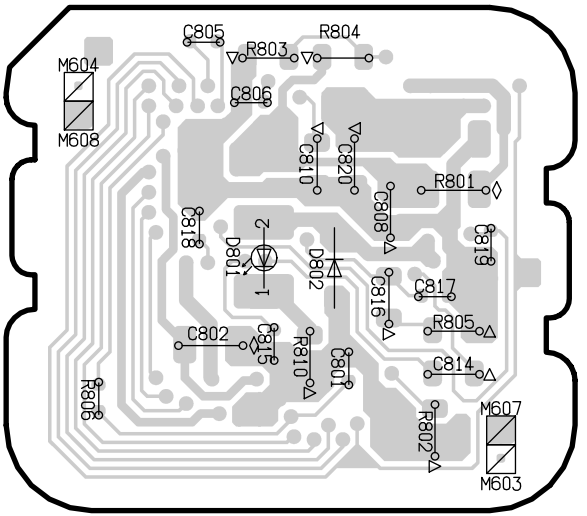


NV-GS5, GS4, GS3, GS1
VTR OPERATION FLEX. UNIT
SCHEMATIC DIAGRAM

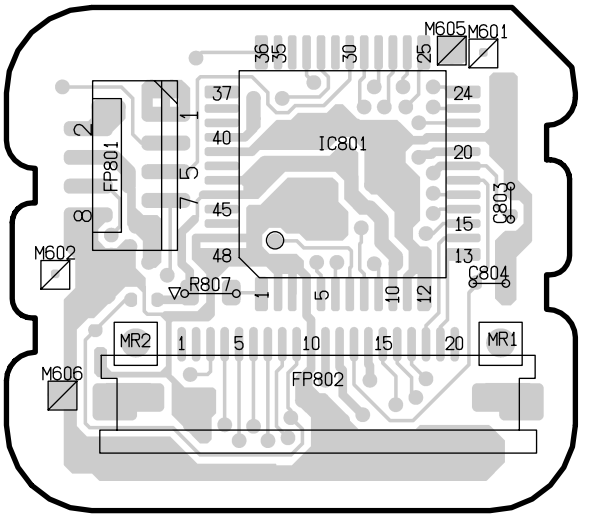
C B A

1 2 3 4

(VEP28295A)



(COMPONENT SIDE)

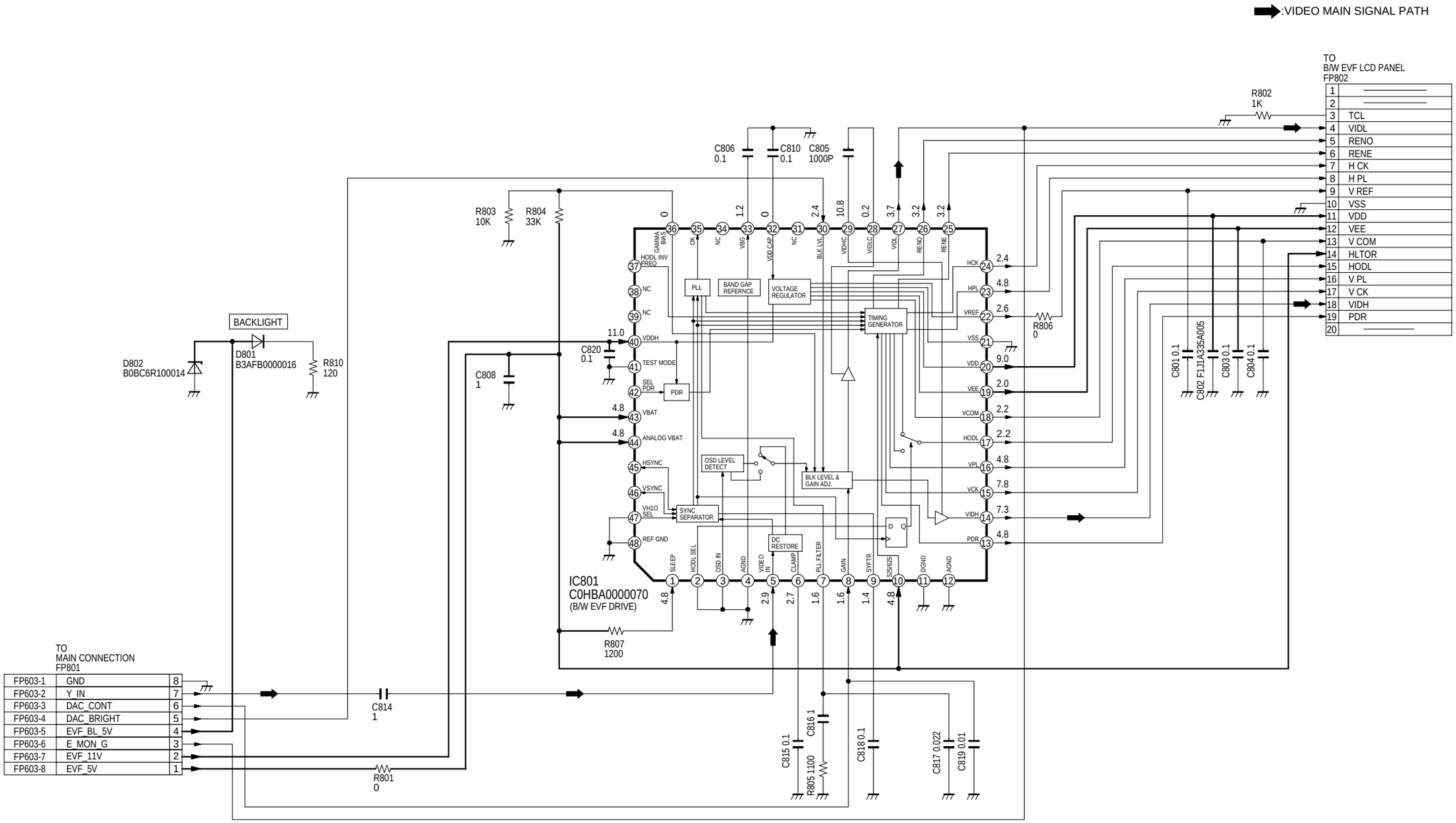


(FOIL SIDE)

NV-GS5,GS4,GS3,GS1
B/W EVF C.B.A. (NV-GS4,
GS3EG/EGM/B,GS1 ONLY)

(B/W EVF C.B.A.)

:VIDEO MAIN SIGNAL PATH

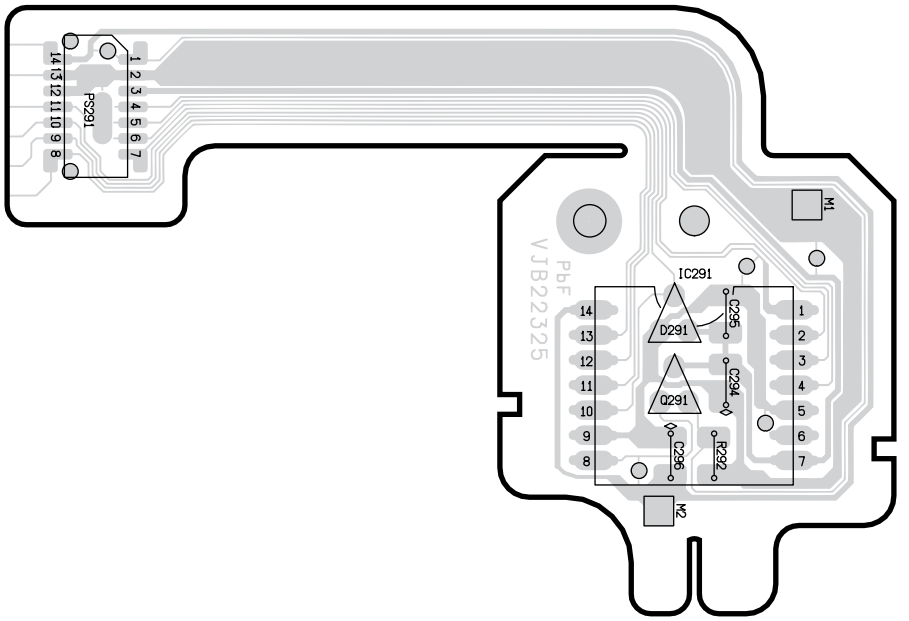


NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGREM IS STOP MODE.(EVF:ON)

NV-GS5,GS4,GS3,GS1
B/W EVF SCHEMATIC DIAGRAM
(NV-GS4,GS3EG/EGM/B,GS1 ONLY)

(VEP22325)



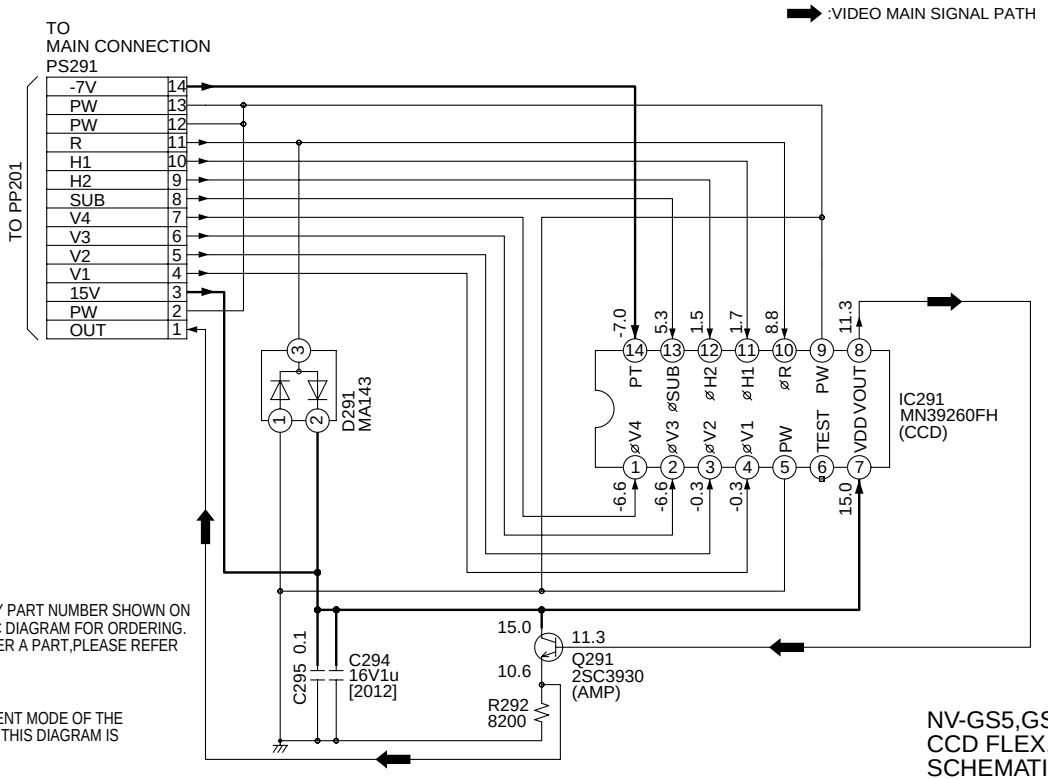
NV-GS5,GS4,GS3,GS1
CCD FLEX. CARD C.B.A.

B

A

1 2 3

(CCD FLEX.CARD C.B.A.)



NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

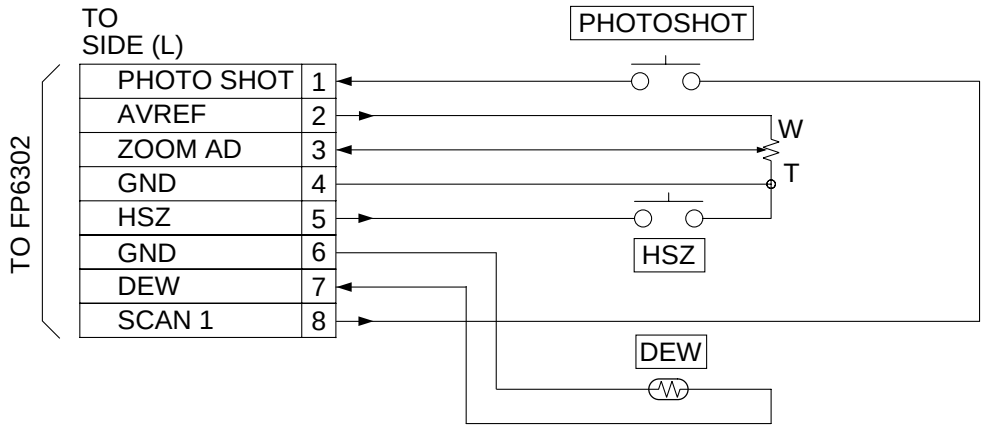
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NV-GS5,GS4,GS3,GS1
CCD FLEX. CARD
SCHEMATIC DIAGRAM

C B A

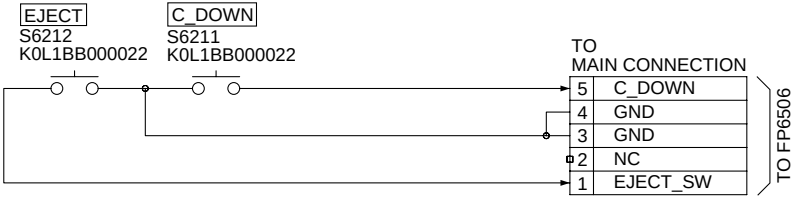
1 2 3 4

(CASSETTE COVER UNIT)



NV-GS5, GS4, GS3, GS1
CASSETTE COVER UNIT
SCHEMATIC DIAGRAM

(MAIN FRAME UNIT(CASSETTE DOWN FLEX. CARD C.B.A.))



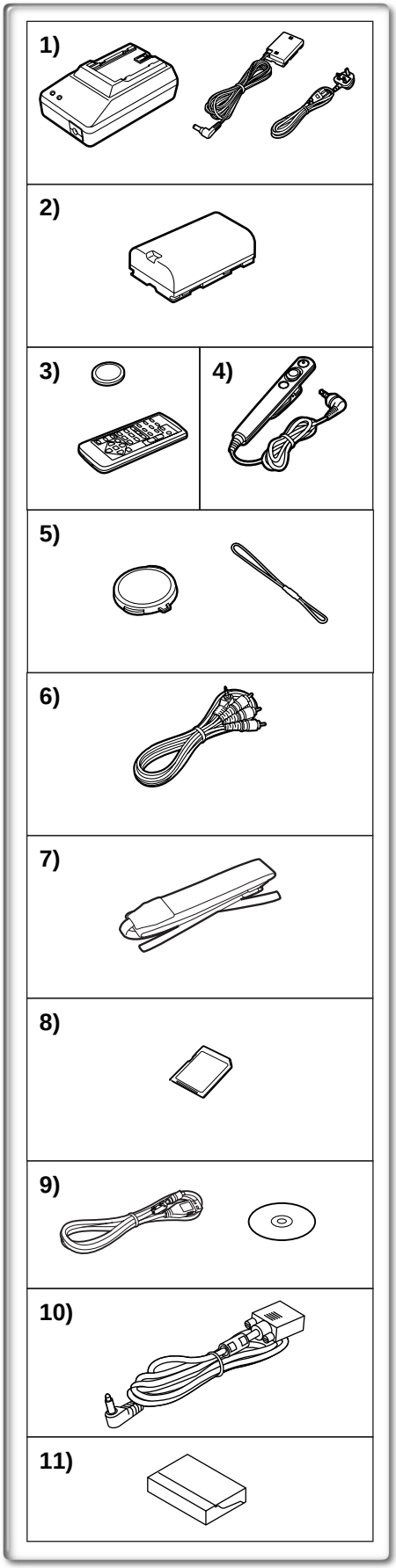
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-GS5,GS4,GS3,GS1
MAIN FRAME UNIT
(CASSETTE DOWN FLEX. CARD)
SCHEMATIC DIAGRAM

B

A

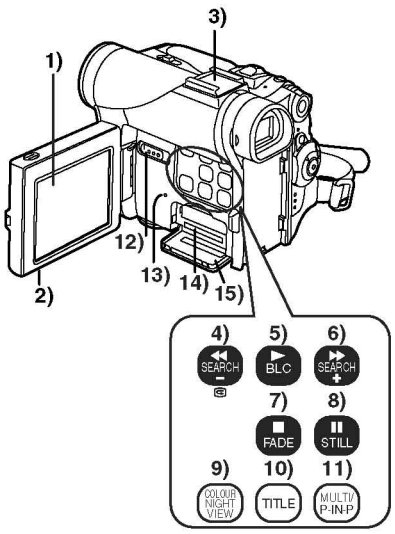
1 2 3 4

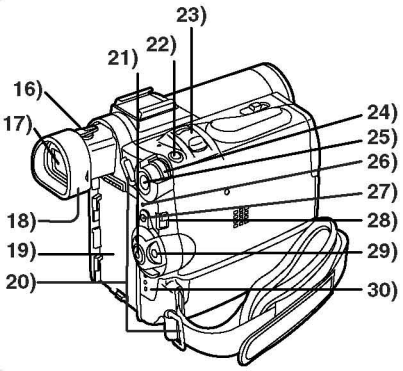


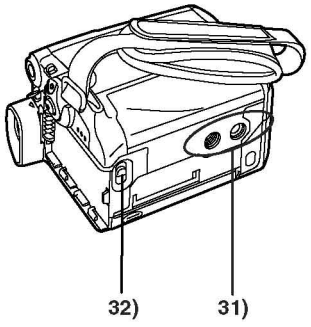
Standard Accessories

Illustrated on the left are accessories supplied with the Movie Camera.

1) **AC Adaptor, DC Input Lead and AC Mains Lead**
2) **Battery Pack**
3) **Remote Controller and Button-Type Battery**
4) **Free Style Controller**
5) **Lens Cap, Lens Cap String**
6) **AV Cable**
7) **Shoulder Strap**
8) **SD Memory Card (NV-GS5 Series, GS4 Series only)**
9) **USB Connection Cable (NV-GS5 Series, GS4 Series only)**
   Driver Soft (NV-GS5 Series, GS4 Series, GS3EN/A/ENT)
10) **Interface Cable (NV-GS3EN/A/ENT only)**
11) **Head Cleaner (NV-GS5EN/A/ENT, GS3EN/A/ENT only)**







Controls and Components

1) LCD Monitor

• Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD Monitor screen. However, this is not a malfunction and does not affect the recorded picture.

---

2) LCD Monitor Open Knob [OPEN▼]
3) Accessory Shoe
- Accessories, such as a stereo microphone (VW-VMS2E; optional), are attached here.

4) Rewind/Review Button [◀◀]
Reverse Search Button [SEARCH−]
Recording Check Button [⟲]
5) Play Button [▶]
Backlight Button [BLC]
6) Fast Forward/Cue Button [▶▶]
Forward Search Button [SEARCH+]
7) Stop Button [■]
Fade Button [FADE]
8) Pause Button [❚❚]
Still Button [STILL]
9) Colour Night View Button [COLOUR NIGHT VIEW]
10) Title Button [TITLE] (NV-GS4/GS5 only)
11) Multi/P-in-P Button [MULTI/P-IN-P]
12) Tape/Card Photoshot Selector [TAPE/CARD]
Tape/Card Photoshot/Card Mode Selector [TAPE/CARD/CARD MODE] (NV-GS5 only)
13) Card Access Lamp [ACCESS] (NV-GS4/GS5 only)
14) Card Slot (NV-GS4/GS5 only)
15) Card Slot Cover (NV-GS4/GS5 only)
16) Eyepiece Corrector Knob
17) Viewfinder

• Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the Viewfinder screen. However, this is not a malfunction and does not affect the recorded picture.

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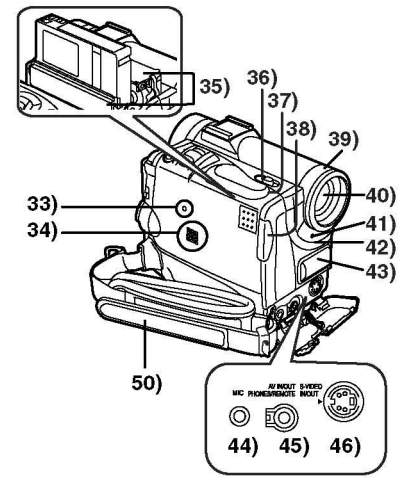
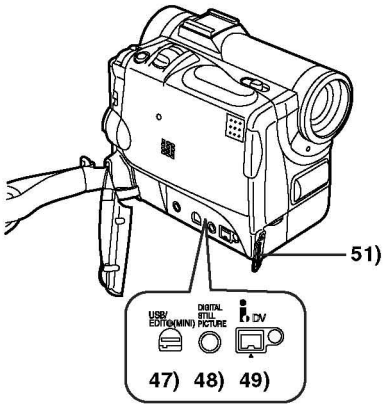
18) Eyecup
19) Battery Holder
20) Shoulder Strap Holders
21) Recording Start/Stop Button
22) Photoshot Button [PHOTO SHOT]
23) Zoom Lever [W/T]
24) Multi-Function Dial [PUSH]
25) Menu Button [MENU]
26) Quick Start Recording Lamp
27) Quick Start Recording Button [QUICK START]
28) Mode Selector Switch [AUTO/MNL/FOCUS]
29) Off/On Mode Selector Switch [OFF/ON/MODE]
30) Operation Mode Lamps [CAMERA/VCR] (NV-GS1/GS3 only)
[CAMERA/VCR/CARD P.B] (NV-GS4/GS5 only)
31) Tripod Receptacle
- Used for mounting the Movie Camera on an optional tripod.

32) Battery Eject Button [BATT]





33) Reset Button [RESET]
34) Speaker
35) Cassette Holder
36) Cassette Eject Lever [OPEN/EJECT]
37) Cassette Compartment Cover
38) Cassete Cover Close Button [PUSH CLOSE]
39) Lens Hood
40) Lens
41) Recording Lamp
42) White Balance Sensor
Remote Control Sensor
43) Microphone (built-in, stereo)
44) Microphone Socket [MIC]
- Connect with an external microphone or audio equipment. (When this socket is in use, the built-in microphone does not operate.)

45) Audio-Video Input/Output Socket [AV IN/OUT]
(Input function on NV-GS5 Series, GS3EN/A/ENT Model only)
Headphone Socket [PHONES]
Free Style Controller Socket [REMOTE]
- Connecting an AV Cable or Free Style Controller to this socket activates the Movie Camera's built-in speaker, but connecting a headphone, etc. deactivates it.

46) S-Video Input/Output Socket [S-VIDEO IN/OUT]
(Input function on NV-GS5 Series, GS3EN/A/ENT Model only)
47) USB Socket [USB] (NV-GS4/GS5 only)
Edit Socket [EDIT(MINI)]
48) Digital Still Picture Terminal [DIGITAL STILL PICTURE]
49) DV Terminal
- Connect this to the digital video equipment.

50) Grip Belt
51) Lens Cap String Holder

	INITIAL/LOGO	ABBREVIATIONS
A	A GND	Analogue GND
	A HASW	Audio Head Amp Switching Pulse
	A HSW	Audio Switching Pulse
	A MUTE	Audio Mute
	A ORP	Audio Overlap Pulse
	A. TR	Auto Tracking
	A0-8, 0-17	Memory Address
	A3V2	AD Converter Reference Voltage
	AB0-4	Address Bus
	AB0-4, AB12-15	Address Bus Line 0-4, 12-15
	ABSF	Focus Encoder Input
	ACI	Analogue Channel Cording IC
	AD	AD Converter
	AD	Auto Date, Analogue Digital Converter
	AD CLK	AD Clock
	AD REC	Audio Delayed REC
	AD0-6	Address
	AD0-6, ADR0-6	Address Data Line
	ADCLK	Analogue Digital Converter Clock
	ADCNT	Analogue Digital Control
	ADCS	Analogue Digital Chip Select
	A-DET	Audio Detect
	ADREC	Audio Delaied Rec
	ADUB	Audio Dubbing
	AE	Auto Expose
	AECNT	Auto Expose Control
	AEE(H)	Audio E-E (H)
	AEH	Audio Erase Head
	AEIRQ	Auto Expose Interrupt Request
	AF/MF	Auto Focus/Manual Focus
	AF DIS CS	AF DIS Chip Select
	A-FADE(L)	Audio Fade (L)
	AF-AMP	AF HALL Bias
	AFCS	Auto Focus Chip Select
	AFRP	Audio PLL Voltage Control
	AF-VN	Zoom Encoder V-Ref (–)
	AF-VP	Zoom Encoder VREF (+)
	AGC	Automatic Gain Control
	AGCCNT	Automatic Gain Control Control
	AGND	Analogue Ground/Audio Ground
	AGS	Anti Ground Shooting
	AH(P) / (R)	Audio Head (Play) / (Record)
	AHASW	Audio Head Amp Switch Pulse
	AHSW	Audio Head Switch Pulse
	AI, AO	Buffer Input, Output
	AIBCK	Bit Clock (to A/D Converter)
	AIDAT	Serial Data (to A/D Converter)
	AILRCK	L/R Clock (to A/D Converter)
	AIMCK	Master Clock (to A/D Converter)
	ALC CNT	Auto Level Control Control
	ALC MAIN	Auto Level Control Drive
	ALE	Address Latch Enable
	A-LOCK	Full Auto Switch
	A-MUT(H)	Audio Mute (H)
	ANLPTH	Analogue Loop Through High
	AORP	Audio Overlap Pulse
	APCNT	Aperture Control
	APS	Auto Power Save
	ART VH	Artifical Vertical Sync
	AT CNT	Automatic Tracking Gain Adjust
	ATF	Automatic Track Finding
	ATFCLK	41.85MHz Clock
	ATFG	Auto Track Gain
	ATL	Auto Lock Select
	ATN	Absolute Track Number
	ATR OFF(H)	Auto Tracking Off (H)
	ATV	Advanced TV
	AUDIO(N)	Audio (Normal)
	AUX	Auxiliary
	AVDD	Analogue VDD
	AVSS	Analogue Ground
	AWTB	Auto White Balance B-Y
	AWTR	Auto White Balance R-Y
B	BACK	Back-up
	BACK UP	Microcomputer Back-up
	BACK VDD	Back-up Power
	BATT	Battery
	BATT ALARM	Battery Alarm
	BATT REF	Reference Voltage for Battery
	BCB	B Carrier Balance
	BCBM(B-Y)	B-Y Carrier Balance
	BCBM(R-Y)	R-Y Carrier Balance
	BD0-7	REC/Play In/Out Buss
	BDCK	Standard Bus Data Clock (9MHz)
	BDEN	Standard Bus Data Enable
	BEND	Data Block End Request
	BF	Burst Flag Pulse
	BFA	Burst Flag Pulse for Encorder
	BFO/BFI	Burst Flug Input/Output
	BI, BO	Buffer Input, Output
	BL	Back Light
	BL ON	Back Light ON (L)
	BL4V	Back Light 4V
	BLC 0, 1	Back Light Y Control Out, In
	BLDI/O	Back Light Drive Input/Output
	BLK	Blanking Pulse
	BLKA	Blanking for Encorder
	BLKA	Blanking Pulse for Encorder
	BLKI/O	Blanking Pulse In/Out

	INITIAL/LOGO	ABBREVIATIONS
	BLKZ	Blanking Pulse for Zoom Encorder
	BM	Balance Modulator
	BQUIET	Bus Out Control Signal
	BUF IN/OUT	Buffer In/Out
	B-Y KB	B-Y Carrier Balance
	B-YO	B-Y Signal Out
C	C A In/Out	Pre-Aperture In/Out
	CAPSTP	Capstan Stop Flag
	C CNT	Colour Control
	C SYNC	Composite Sync Signal
	C/N	Carrier/Noise
	C0-7, C00-07	Chrominance Signal 0-7
	CAGAIN	Aperture Gain Control
	CAM	Camera
	CAM CLK	Camera Clock
	CAM RST	Camera Reset
	CAM SIOC	Camera Serial In/Out Contol
	CAM T	Camera Test
	CAM TL	Capstan Trque Limit
	CAP EC	Capstan Trque Control
	CAP P(H)	Capstan Power On (H)
	CAP R/F/S	Capstan Reverse (H)/Stop (M)/Forward (L)
	CAP SW	Capstan Power Control Switch
	CAPSTP H	Capstan Stop Flag (Stop High)
	CAPVM	Capstan Motor Current
	CAPVS	Capstan Motor Power Control Switch
	CAS	Compresion, Audio Process, Shuffling/Deshuffling
	CAS	Memory Address Strobe (Active Low)
	CASDOWN, DWN	Cassette Down (L)
	CB, CR	Chroma B, Chroma R
	CBLK	Composite Blanking Pulse
	CC	Channel Cording
	CCA	Curent Drive Control
	CCA	Current Control Amp
	CCD	Charge Coupled Devise
	CCW	Counterclockwise
	CD SP0-7	Digital Chroma
	CDS	Correlate Double Sampling Signal
	CDS1, 2	Sampling Pulse for CCD Output Signal
	CE	Chip Enable
	CE	Control Pulse Erase
	CEC	Capstan Error Code
	C-ERA(H)	Control Erase (H)
	CFEM	Chrominance Memory Signal
	CFM	Chrominance Field Memory
	CFM1-4	Chroma Field Memory Signal
	CG CLK	Character Generator Clock
	CG CLK DATA	Clock Generator Data
	CG DATA	Character Generator Data
	CGC	Chrominance Gain Control
	CGCS	Character Generator Chip Select
	CGO	Character Generator Serial Data
	CH	Charge

	INITIAL/LOGO	ABBREVIATIONS
	CH1	Channel 1 (Odd Field)
	CHR	Character
	CHR BACK	Character Back-up
	CHR MIX	Character Mix
	CI, CO	Buffer In/Out
	CI,CO	Buffer Input & Output
	CIF	Control Signal Forward Input
	CIF, CIR	Positive Control Pulse, Negative Control Pulse
	CIR	Control Signal Reverse Input
	CK	Clock
	CL/CLK	Clock
	CLASS	Classeffication Signal for Compress (DCT/VLC)
	CLASS 0.1	Class Control Signal Durring DCT/VLC
	CLK135	13.5MHz System Clock
	CLK18	18MHz System Clock
	CLK2	Clock 2 (824XFH: 12.875MHz)
	CLK246	24.576MHz Clock
	CLK27	27MHz System Clock
	CLK450	450KHz Clock
	CLKDCLK	Digital Clock
	CLK-PH	Clock Phase Control
	CLK-REF	Reference Clock
	CLP-RST-H	Clamp Reset High Signal
	CLX	TFT X-axis Transmission Clock
	CLX, CLX1-4	Shift Clock for X Direction (LCD Panel)
	CLY	Shift Clock for Y Direction (LCD Panel)
	CLY	TFT Y-axis Transmission Clock
	CLY FG	Cylinder FG Signal
	CMEMO0-3	Chroma Memory Output Signal 0-3
	CMIX	Character Mix
	CMO	Chrominance Memory Output
	COMPC	Position Detection Pulse
	COM RDY	Serial Enable Signal
	CMODE	Camera Mode
	CNCLK	Clock
	CNR	Chrominance Noise Reduction
	CNT, CONT	Control
	CO	Control Out
	CO0-7	Chrominance Output 0 to 7 (Digital)
	COM	Common
	COM RDY	Serial Transmission Enable
	COMB	Comb Filter
	COS EQ	Cosin Equalizer
	CP	Clamp Pulse
	CP ON(H)	Camera Power On(H)
	CP2, 20	Clamp Pulse
	CP2A, CP2O	Encoder Clamp Pulse
	CPN	Component Signal
	CPOB	Clamp Pulse for Optical Blanking
	CPS	Composite Signal
	CPV	Gate Scan Clock
	CR OUT	Pre Apature Out
	CR POW SW	Camera Remote Power On Switch
	CRA	Aperture Gain Control

	INITIAL/LOGO	ABBREVIATIONS
	CRA	Pre Apature Gain Control
	CRST	Camera Reset
	CS	Chip Select
	CS 0-7	Chrominance Signal Out 0-7
	CSEL	Clock Phase Select
	CSI 0-7	Chrominance Signal In 0-7
	CTSW	Crosstalk Switch
	CURR	Current
	CW	Clockwise
	CYL EC	Cylinder Motor Trque Control
	CYL PG	Cylinder Motor PG
	CYL VM	Cylinder Motor Current or Power
D	D CLK	Digital Clock
	D MODE	Digital Mode Switch Signal
	D01-03	Zoom 01-03
	DA UV SEL	D/A Convertor U/V Select
	DAC	Digital Analogue Converter
	DAG	Digital Analogue Ground
	DB0-7	Data 0-7
	DB0-7	Microprocessor Data
	DCC	DC Clamp Control
	DCCNT	DC Control
	DCI	Digital Channel Cording IC
	DCLR	Digital Clear
	DCP	Digital Clamp Pulse
	DCS-CLK, DA	CAS & DV I/F Serial Clock
	DC-STP1	DCS Serial Start
	DC-STP2	DCS Serial Stop
	DCT	Discrete Cosine Transform (Compression)
	DCX7	Serial Data
	DEDP 0-3	Playback Data
	DEDR 0-3	Rec Data
	DEMO	Demodulation
	DEMP	A/D Convertor Empahsis Control
	DEMP	De-Emphasis
	DFD 0-7	Encode Data In/Out Between Shaffling Memory
	DFD0-7	Encode Input/Output Signal for Shuffling Memory
	DIBDCK	Bit Clock
	DICLK	Digital Clock
	DIDAT	Serial Data
	DIDAT	Serial Data Durring Digital Audio In
	DIF	Digital Interface
	DILRCK	L/R Clock
	DILRCK	Serial Clock Durring Digital Audio In
	DIMCK	Master Clock
	DIMCK	Mater Clock Durring Digital Audio In
	DIO 1-8	Data In/Out
	DIOS	Data In/Out Select Control Signal
	DIOS	Select Signal for Digital In/Out
	DIS	Digital Image Stabilizer
	DIS R/B	Digital Image Stabilizer Read (H)/Busy (L)
	DIS R/B	DIS IC Rady/Busy
	DIS/KAND	Digital Image Stabilizer/Sensitivity
	DISCS	Dis Chip Select
	DISP	Display
	DL	Delay Line
	DOBCK	Audio A/D Convertor Bit Clock
	DOCTL	Data Output Control Signal
	DODAT	Serial Data (to D/A Converter)
	DOLRCK	Audio A/D Converter LR Clock
	DOLRCK	L/R Clock (to D/A Converter)
	DOMCK	Audio A/D Converter Master Clock
	DOMCK	Master Clock (to D/A Converter)
	DQ 1-16	Memory Data
	DRAM CAS	D-RAM Colum Address Strobe
	DRAM OE	D-RAM Out Enable
	DRAM RAS	D-RAM Read Address Strobe
	DREC	AV Delayed REC Start Pulse
	DRK	Dark (LPF Switch for Auto Focus)
	DS1, 2	Double Sampling Pulse
	DSF 0-7	Data In/Out for Shaffling Memory
	DSF 0-7	Input/Output Data to Shuffling Memory (18MHz)
	DSP	Digital Signal Processor
	DSP R/B	DSP IC Rady/Busy
	DSP-48K-H	DSP IC Clock Select
	DSTB	Data Stobe Signal
	DSV	Digital Sum Variation
	DV	Digital Video
	DVB	Digital Video Broadcast
	DVC	Digital Video Cassette
	DVDD	Digital VDD
	DVIO	Digital Video Input Output
	DVSS	Digital Ground
	DX	Shift Data for X Direction (for LCD)
	DY	Shift Data for Y Direction (for LCD)
	DY	TFT Y-axis Shift Data
	DZ	Digital Zoom
E	E Snap	Electric Snap Shot
	E ZM	Electric Zoom
	E2 CS or E2P CS	EEPROM Chip Select
	E2 R/B	EEPROM Rady/Busy
	E2P	EEPROM
	EARP	Earphone
	EC	Torque Control
	ECC	Error Correction Cording
	ECM	Electric Condencer Mic
	ECR	Reference Voltage for Capstan Torque
	EDA	Error Correction, DCI, ATF Servo
	EE CS	EEPROM Chip Select
	EE R/B	EEPROM Read (H)/Busy (L)
	EEPROM	Electric Erasable Programable Read Only Memory
	EIS	Electric Image Stabilizer (DIS)
	EMP	A/D Convertor Emphasis Control
	ENAB	Enable
	ENV	Enverope
	EOB	End of Block

	INITIAL/LOGO	ABBREVIATIONS
	EQ	Equalizer
	EVF	Electric View Finder
	EXT DC	External DC (AC Adaptor)
	EXT DC(H)	AC Adaptor DC (H)
	EXT NOREG	AC Adaptor 6V
	EXT S DATA	Serial Data for Edit
	EXT SCK	Serial Clock for Edit
	EZOOM	Electric Zoom
F		
	F ENC	Lens F-Value
	FACT MODE	Factry Mode (not used in the service)
	FB	Feed Back
	FC	Saw Tooth Signal In
	FCK	Clock
	FCO	Saw Tooth Signal Generator
	FENC	Focus Encoder
	FEND	Frame End Pulse
	FH2B	FH/2 (15.625KHz / 2=7.8125KHz)
	FIX OSD	Auto Tracking Off (H)
	FLICK	Flicker Output
	FM	Field Memory
	FM0-7	Field Memory 0-7
	FMCO0-3	Field Memory Chrominance Out 0-4
	FMDIR	Focus Motor Direction
	FMOEM	Field Memory Enable
	FMOEO	Field Memory Enable
	FMT1-4	Focus Motor Terminal 1-4
	FMY00-07	Field Memory Luminance Out 0-7
	FMYI0-07	Field Memory Luminance In 0-7
	FNO	F Value
	FPS	Frame Refference Signal
	FR	Capstan Reverse High
	FRP	Frame Refference Pulse
	FRPSO	Frame Start Pulse
G	G1, G2, G3	Gap 1, 2 and 3
	GCA	Gain Control AMP
	GCNT	Gain Control
	G-CNT	AGC Adjustment
	GCTRL	Gain Control
	GENE	Generator
	GF	FG AMP Terminal
	GSW	Ground for Switching Power
H	H/M/N	Hi-Fi / Mix / Normal
	H/N	Hi-Fi / Normal
	H1, 2	H. CCD Drive Pulse
	HAP	Horizontal Aperture
	HASW	Head AMP Switching Pulse
	HB	Hall Bias
	HBR SET	High Brightness Set
	HBRST	High Brightness Set
	HCLR	High Clear
	HCP	Shift Clock for Horizontal Drive

	INITIAL/LOGO	ABBREVIATIONS
	HD	Horizontal Drive Pulse
	HDTV	High Definition TV
	HEX	Hexadecimal
	HG	Hall Gain
	HID	Head Switching Pulse
	HLT	High Bright Signal
	HALL IN(+), (–)	Input Signal from Hall IC
	HP	Headphone
	HPF	High Pass Filter
	HSE	Modulated Data Output
	HSP	Timing Pulse for Shaffling Memory
	HSS	Horizontal Sync Signal
	HSW	Head Switching Pulse
	HS-WT	High Speed Zoom
	HSZ	High Speed Zoom
I	I/F	Interface
	I-2 C	Inter Integrated Circuit
	ID(H)	Wide Television (H)
	IMP	Inter Microprocessor Protocol
	INF	CCD Input Signal 1
	INF	Input Frame Signal
	INS	CCD Input SIgnal 2
	INTER	Interval Recording
	INV	Inverter
	IOU	R-Y Analogue Signal Output
	IOV	B-Y Analogue Signal Output
	IOY	Y Analogue Signal Output
	IR	Infrared Rays
	IRDET	Imfrared Ray Detection
	IREF	Current Adjustment Terminal
	IRIS/SH	Iris / Shutter Control
	IRQ	Interrupt Request
	ITI	Insert & Track Information
J	JPEG	Joint Photographic Image Cording Experts Group
K	KANDO	Digital Gain Up
	KB	Carrier Balance
	KEY IN	Key Scan
	KND	Digital Gain Up
	KNEE	Luminance Compensate
L	LCD	Liquid Crystal Display
	LCD P(L)	LCD Power On (L)
	LD	Load Pulse
	LDD	Liquid Direct Drive
	LEDCNT	LED Control
	LI-BATT	Lithium Battery
	LOAD	Loading
	LOAD F, R	Loading Direction (F: Forward / R: Reverse)
	LPF	Low Pass Filter
	LRMONO	Monoral Audio (L + R)
	LSB	Least Significant Bit

INITIAL/LOGO		ABBREVIATIONS
	LVL	LPF Switch for Auto Focus
M	M1-3	Motor Coil Terminal 1 to 3
	MA0-5	Microprocessor Address Data 0-5
	Mbps	Megahertz Bit Per Second
	MD	Modulation
	MD0-7	Microprocessor Data 0-7
	MDT0-7	Microprocessor Data 0-7
	ME (TAPE)	Metal Evaporated (Tape)
	MENB	Focus Motor Enable
	MFF	Manual Focus Far
	MFN	Manual Focus Near
	MHSYNC	Monitor Horizontal Sync Signal
	MIC	Memory In Cassette
	MIG	Meta In Gap
	MIX N.R.D.	Non Rec Data Mix
	MOD	Modulation
	MOUT	Mic Out
	MP (TAPE)	Metal Particle (Tape)
	MPEG	Moving Picture Image Cording Experts Group
	MPEG2	Moving Picture Image Cording Experts Group Phase 2
	MRST	Focus Motor Reset
	MSB	Most Signal Bit
	MVSYNC	Monitor Vertical Sync Signal
N	N/F	Near/Far Focus
	N/P	NTSC/PAL
	NB1-3	Base for NPN Transistor
	NC	No Connection
	NC1-3	Corrector of NPN Transistor
	NCLR	Power On Reset
	NCP1	Clamp Pulse
	NCP2+VDH	Clamp Pulse + Horizontal Drive Pulse
	NCP2+VDM	Clamp Pulse + Gate Pulse
	NDE	Non Liner De-Emphasis
	NE	Emitor of NPN Transistor
	NLE	Non Liner Emphasis
	NR	Noise Reduction
	NRD	Non Rec Data
	NRD BLK	Non Rec Data Blanking
	NRD CLK	No Rec Data Clock
	NRE	Read Enable Input (Low Active)
	NWE	Write Enable (Low Active)
O	OB	Optical Black
	OBCNT	Optical Black Control
	OBREF	Reference Voltage for Optical Black Control
	OE	Output Enable
	OFH	Horizontal Counted Down Clock Signal (Reference)
	OFS	Offset
	OP	Operation AMP Output
	OSD	ON Screen Display
	OVL	Overlap Pulse
	OZ	Optical Zoom

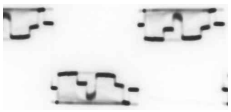
INITIAL/LOGO		ABBREVIATIONS
P	P SW	Power Switch
	PB1-3	PNP Base 1-3
	PBCTL	Play Back Control
	PBCTL	Pre-Branking Control
	PBH	Head Amp Switch
	PBLK	Pre-Blanking (Pulse)
	PC1-3	Corrector of PNP Transistor
	PCBM	Carrier Balance
	PCH	Phase Compensator (Hall AMP)
	PCI	Phase Compensator (Current)
	PCO	Phase Compensator Out
	PCS	Switching Power Control
	PCV	Phase Compensator (Voltage)
	PE	Emitter of PNP Transistor
	PED	Pedestal
	PEDECNT	Pedestal Control
	PENO	Alarm (L)
	PFP	Pilot Frame Position
	PGA, B	Power Ground A, B
	PGC	Pulse Generator Comparator
	PGI	Pulse Generator Input
	PGMM	Pulse Generator Monostable Multivibrator
	PGO	Output of Pulse Generator AMP
	PMODE	Select Signal for Normal / Wide Screen
	PON	Power On
	POR	Power On Reset
	POSCOM	Common Position
	PREAMP	Pre-AMP
	PREBLK	Pre-Blanking
	PT	Protect for V Voltage
	PWM	Pulse Width Modulation
	PWMB	Pulse Width Modulation Pulse
Q	Q2H	Source Output Select
R	R CTL P	Recorded Control Pulse (+)
	R CTL R	Recorded Control Pulse (–)
	R/B	Read/Busy
	R/L	Direction Control for Data Transmition
	RA	Recording AMP
	RA1	Rec AMP 1
	RAC AC	Rec Audio Current
	RAD	Read Address Data
	RAE	Read Address Enable
	RB	Read Busy
	R-B	R Bias
	RCB	R Carrier Balance
	RE	Read Enable
	RE(F), (S)	Rotary Erase Head Transformer
	REB	R Bias
	REC CC	Rec Current Control
	REC CCNT	Rec Current Control
	RECCTRL	Recording Control Pulse
	RECI	Rec Amp Switch

INITIAL/LOGO		ABBREVIATIONS
	RENCF	Lens Control (Forward)
	RENCR	Lens Control (Reverse)
	RERASE	Rotary Erase Head
	RGBIV1-2	1V Inverted Signal 1-2
	RGO R/G OFF	Offset Voltage for AWT R
	RSF	Capstan Direction (Reverse / Stop / Forward)
	RST	Reset
	RSTB	R Strobe
	RSTPWD	Reset Power Down Input
	RSTR	Reset Read
	RSTW	Reset Write
	RT	Saw Tooth Terminal
	RVCO	Resister for Oscillation
	RW	Read Write
	RWAE	Read Write Enable
S	S PHOT	Supply Photo Transistor
	S/H	Sampling Hold
	S/S	Start/Stop
	SBD	Serial Data
	SBI	Serial Data Input
	SBO	Serial Data Output
	SBT	Serial Clock
	SCAN0-5	Key Scan 0-5
	SCK	Serial Clock
	SCR	Search
	SCR, S.C.R.	Still Cue Review
	SEG.	Segment
	SET	White Balance Set
	SH/IRIS	Shutter/Iris Control
	SHIFT	Capasitor for Phase Shift
	SI	Serial Data Input
	SIC	Shift In Clock Input
	SIOC	Serial In/Out Control
	SMCE	Shaffling Memory Chip Enable
	SMRS	Shaffling Memory Read Strobe
	SMWE	Shaffling Memory Write Enable
	SMWS	Shaffling Memory Read Strobe
	SNAP	Snap Shot
	SNS LED	Sensor LED
	SO	Serial Data Output
	SPA	ATF Smapling Pulse
	SPEN	8 Bit Shift Register Enable
	SPK	Speaker
	SPO	Reset for Switcing Power
	SPST	8 Bit Shift Register Strobe
	SREELP	Supply Reel Pulse
	SRT	Start
	SSA	Start Sync block Area
	SSW	Select Signal for Low Pass Filter
	ST5V	Safety Tab 5V
	STAB	Safety Tab Switch
	STB	Stand by Signal
	STB	Strobe
	SWB	Switching Pre-Drive Pulse
	SYL EC	Cylinder Torque Control
	SYL FG	Cylinder FG
T	T PHOT	Take-up Photo Transistor
	TBC	Time Base Conntrol
	TFT	Thim Film Transistor
	TH	Thermostat for Battery
	TI	Test Mode Select
	TL	Torque Limit
	TM	Sub Code
	TMD	Sub Code Data
	TRE	Tracking Error Signal
	TREEL(P)	Take-up Reel (Pulse)
	TRFIX	Tracking Fix
	TRIWAVE	Tracking Wave
	TRP	Tracking Position
	TRP	Trap
	TSR	Head Switching Refference
	TST	Time Scale Transfer
U	U/V SEL	R-Y/B-Y Select Signal
	UNLOAD	Un-Loading
	UNRE	Microprocessor Read Enable
	UNWE	Microprocessor Write Enable
	UV	R-Y/B-Y
	UV SEL	R-Y/B-Y Select Signal
V	V1-V4	V. CCD Drive Pulse
	VB	VH Filter Switching
	VCE	Power Terminal
	VCNTL	Video Control
	VCO	Voltage Control Oscillator
	VCP	Shift Clock Output for Vertical Drive
	VCTLD	Video Control
	VCTRL	Voltage Charge Control
	VD	Vertical Drive Pulse
	VDDX	X Drive Power for Colour LCD
	VDDXY	XY Drive Power for Colour LCD
	VDDY	Y Drive Power for Colour LCD
	VDREC	Video Delayed Rec
	Vgg	Voltage for Gate IC
	Vgl	Gate off Voltage
	VID	Video Signal Out
	VIN	Video In
	VITC	Vertical Interval Time Code
	VITERBI	One of Signal Detection Method
	VL	Low Voltage
	VLC	Variable Length Cording
	VLOCKP	Artificial Sync Pulse
	VLP	Artificial Sync Pulse
	VM	Motor Voltage
	VMD	Velocity Mode Data
	VMD1-3	Electric Shutter Mode

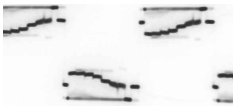
INITIAL/LOGO		ABBREVIATIONS
	VMODE	NTSC/PAL Select Switch
	VMVH	VH Filter Switching
	VORP	Video Overlap
	VRB	Voltage Refference Bottom
	VRBS	Voltage Refference Bottom Output
	VREF1R3V	Refference Voltage 1.3V
	VREF3R3V	Refference Voltage 3.3V
	VREFH	Refference Voltage High Side
	VREFL	Refference Voltage Low Side
	VRI	Refference Voltage Input
	VRO	Refference Voltage Output
	VRT	Voltage Refference Top
	VRTS	Voltage Refference Top Output
	VS	Switching Comparator
	VSS	Vertical Sync Signal
	VSSX	X Driver Power for Colour LCD
	VSSXY	X-Y Driver Power for Colour LCD
W	W/N	Mode Select for Window Mode
	W/N	Wide / Normal
	WAD	Write Address Enable
	WAE	Write Address Enable
	WAERAE	Write Address Enable
	WARI	Interrupt
	WB	White Balance
	WE	Write Enable
	WEM	Memory Write Enable
	WHD	Wide Horizontal Drive Pulse
	WIDE A	Wide Zoom
	WSB	B AGC Control
	WSR	R AGC Control
	WTV	Wide TV
X	XP	FG Logic Reset
Y	Y FM0-7	Y Field Memory 0-7
	YCE	Cylinder Error Code
	YGC	Y Gain Control
	YMO 0-7	Y Field Memory 0-7
	YNCST	Noize Canceller
	YNR	Luminance Noise Reduction
	YSDP 0-7	Digital Y Out 0-7
Z	Z.ENC	Zoom Encoder
	Z.MIC	Zoom Mic
	ZENC	Zoom Encoder Output
	ZMDIR	Zoom Drive
	ZMEN	Zoom Enable
	ZMT	Zoom Motor Tele Side
	ZMT (+)/(–)	Zoom Motor (+)/(–)
	ZMTER	Zoom Motor Tele Side
	ZMW	Zoom Motor Wide Side
	ZSW	Zoom Switch

INITIAL/LOGO	ABBREVIATIONS

(NV-GS5,GS3EN/A/ENT)



FP801-3 REC/PLAY
8.0Vp-p (20usec.div.)



FP801-2 REC/PLAY
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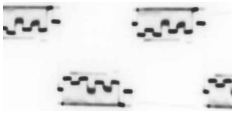
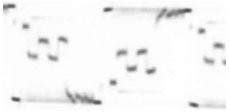


FP801-4 REC/PLAY
8.0Vp-p (20usec.div.)

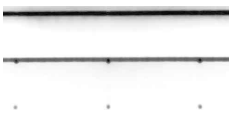


IC901-4 REC/PLAY
4.0Vp-p (20usec.div.)

IC901-6 REC/PLAY
3.6Vp-p (20usec.div.)

IC901-8 REC/PLAY
3.6Vp-p (20usec.div.)

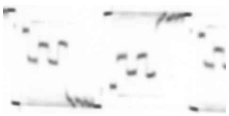
IC901-45 REC/PLAY
2.8Vp-p (5msec.div.)



IC901-46 REC/PLAY
2.8Vp-p (5msec.div.)

(NV-GS4,GS3EG/EGM/B,GS1)

IC801-5 REC/PLAY
1.0Vp-p (20usec.div.)

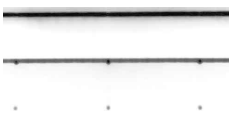


IC901-4 REC/PLAY
4.0Vp-p (20usec.div.)

IC901-6 REC/PLAY
3.6Vp-p (20usec.div.)

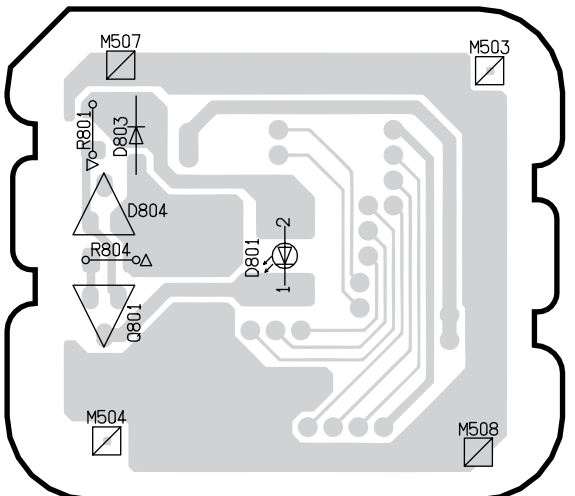
IC901-8 REC/PLAY
3.6Vp-p (20usec.div.)

IC901-45 REC/PLAY
2.8Vp-p (5msec.div.)

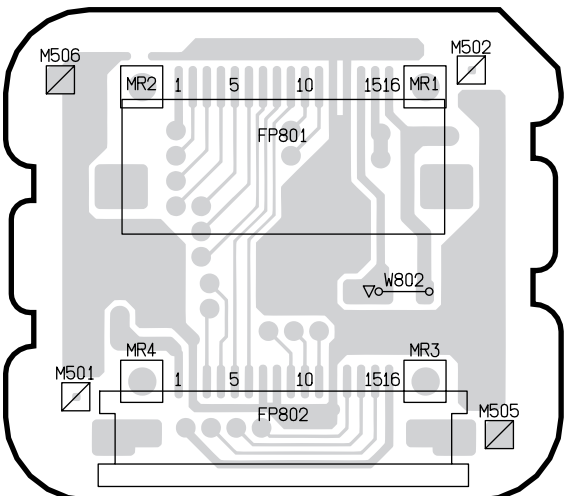


IC901-46 REC/PLAY
2.8Vp-p (5msec.div.)

(VEP28293A)



(COMPONENT SIDE)



(FOIL SIDE)

NV-GS5,GS4,GS3,GS1
EVF C.B.A. (NV-GS5,
GS3EN/A/ENT ONLY)

C B A

1 2 3 4 5

(EVF C.B.A.)

:VIDEO MAIN SIGNAL PATH

TO
MAIN CONNECTION
FP801

FP603-1	EVF_BL_5V	16
FP603-2	EVF12V	15
FP603-3	EVF_H/L/NC	14
FP603-4	D_GND	13
FP603-5	D_GND	12
FP603-6	STV	11
FP603-7	CKV2	10
FP603-8	XENB	9
FP603-9	EVF3V	8
FP603-10	STH	7
FP603-11	CKH2	6
FP603-12	CKH1	5
FP603-13	E_B_OUT	4
FP603-14	E_R_OUT	3
FP603-15	E_G_OUT	2
FP603-16	E_COM	1

TO
EVF LCD PANEL
FP802

1	VDD
2	VSS
3	VST
4	VCK
5	STB
6	EN
7	DWN
8	RGT
9	HST
10	HCK2
11	HCK1
12	BLK
13	BLUE
14	RED
15	GREEN
16	COM

D803
B0BCGR100014

R801
4700

D801
B3AFB0000027
EVF BACKLIGHT

Q801
B1ABBE000002
(BACKLIGHT CONTROL)

1.7
1.3
0.6

D804
MA3S133

R804
82[D]

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

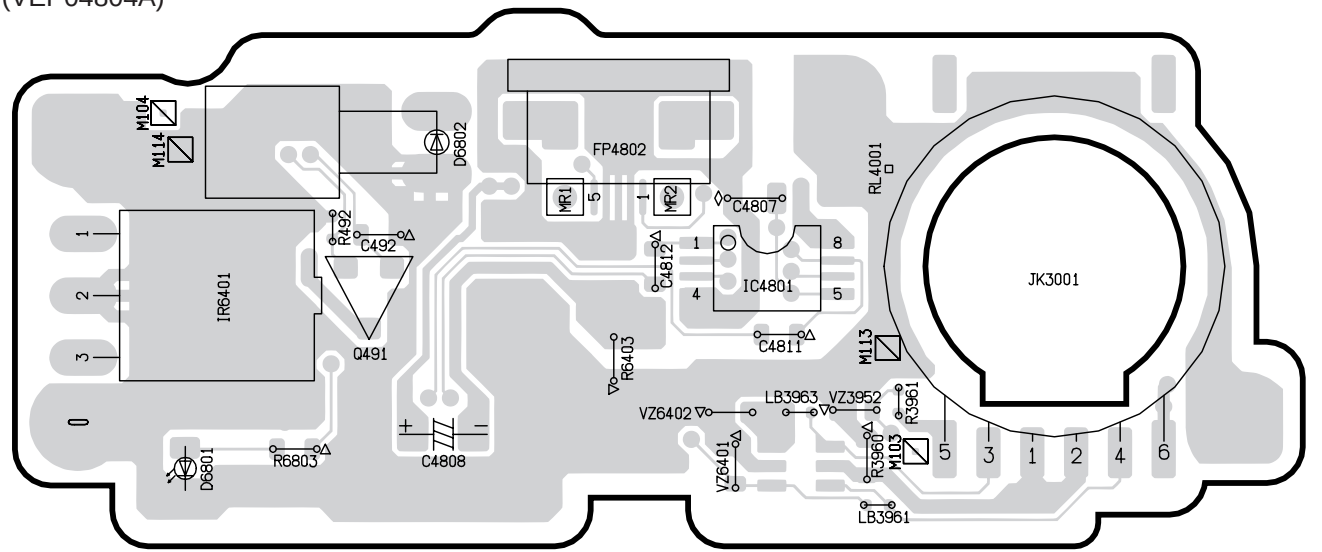
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE. (EVF: ON)

NV-GS5, GS4, GS3, GS1
EVF SCHEMATIC DIAGRAM
(NV-GS5, GS3EN/A/ENT ONLY)

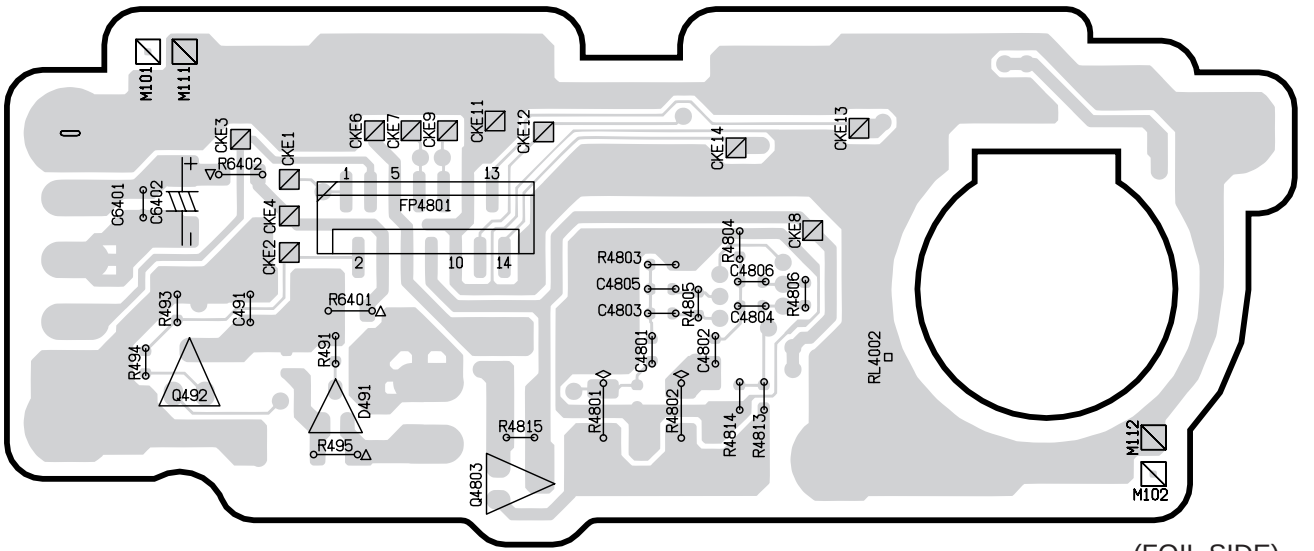
C B A

1 2 3 4

(VEP04804A)



(COMPONENT SIDE)



(FOIL SIDE)

NV-GS5,GS4,GS3,GS1
FRONT C.B.A.

(FRONT C.B.A.)

:VIDEO MAIN SIGNAL PATH
:AUDIO MAIN SIGNAL PATH

MIC UNIT
ECM[R]
M4801
WM-58A112A
ECM[L]
M4802
WM-58A112A

FP4802
ECM[R] 5
ECMGND 4
ECMGND 3
ECMGND 2
ECM[L] 1

R4801 3900 [2012]
R4802 3900 [2012]
R4803 68K
C4801 0.01
C4803 3300P
C4805 0.01
R4805 390K
C4802 0.01
C4806 0.01
C4804 3300P
R4806 390K
R4804 68K

Q4803
2SD1819A
(MIC 5V:ON)
4.2
4.8
4.5
R4813 22K
R4815 4700
C4807 4R7u[2012]
R4814 33K
C4808 F3F0J4760002

IC4801
C0ABBB000106
2.5 2.5 2.5
4 3 2 1
5 6 7 8
2.5 2.5 2.5 4.8

TALLY
D6801
B3AAB0000129
R6803 330[1608]
R6403 0[1608]

TO
MAIN CONNECTION
FP4801

1	TALLY
2	IROUT
3	REMOCON
4	D5V
5	MICGND
6	MICGND
7	MIC[L]
8	MIC5V
9	MIC[R]
10	D_GND
11	D_GND
12	SC_I/O
13	SPLUG_L
14	SY_I/0

TO FP6505

R3961 1K
C4811 1u[1608]
C4812 1u[1608]
LB3961 VLP0329A121
LB3963 VLP0329A121
VZ3952 D4ED1120A002
VZ6401 D4ED1270A008
VZ6402 D4ED1270A008

JK3001
K2HZ104D0001
S VIDEO IN/OUT
3 4 1 2
R3960 0[1608]

R6401 0[1608]
RL4001
RL4002
FRAMEGND

Q491
2SD1030
(AMP)
4.8
3.5
Q492
2SD1819AR
(AMP)
4.8
3.8
3.8
3.3
R495 10M[1608]
C491 0.1
B3GA0000001
D6802
R491 2R2M
D491
MA3S132D
C492 0.47[1608]
R494 1800
R492 330K
R493 4700

IR6401
PNA4618M05VT
(REMOTE CONTROL RECIEVER)
VCC 3
GND 2
OUT 1
R6402 47 [1608]
C6401 0.1
C6402 6V22u [T][Y]

NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

NV-GS5,GS4,GS3,GS1
FRONT & MIC UNIT SCHEMATIC DIAGRAM

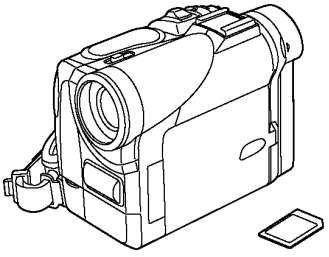
F E D C B A
1 2 3 4 5 6 7 8 9

ORDER NO.VMD0202005C8

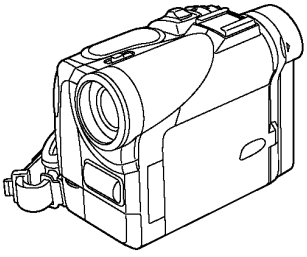
Service Manual

Digital Video Camera/Recorder

Panasonic Mini DV PAL MultiMediaCard™ SD



NV-GS5
NV-GS4



NV-GS3
NV-GS1

NV-GS5EG

NV-GS5EGM
NV-GS5B
NV-GS5EN
NV-GS5A
NV-GS5ENT
NV-GS4EG
NV-GS4EGM
NV-GS4B
NV-GS3EG
NV-GS3EGM
NV-GS3B
NV-GS3EN
NV-GS3A
NV-GS3ENT
NV-GS1EG
NV-GS1EGM
NV-GS1B

VOL.1

Q3-MECHANISM

Panasonic

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SPECIFICATIONS

Digital Video Camera

ITEM	SPECIFICATION
POWER	Source: DC 7.9 / 7.2 V Consumption: Recording 2.6 W (When using Viewfinder) 3.6 W (When using LCD Monitor)
RECORDING FORMAT	Mini DV (Consumer-use Digital Video SD Format)
TAPE USED	6.35 mm digital video tape
RECORDING / PLAYBACK TIME	SP mode: 80 min. with DVM80 LP mode: 120 min. with DVM80
CAMERA	Filter Diameter: 30.5 mm
	Zoom: 10:1 Power Zoom
	Monitor: 2.5-inch LCD
	Lens: Auto Iris, F1.8, Focal Length; 3.15 - 31.5 mm Macro (Full Range AF)
	Image Sensor: 1/4-inch CCD Image Sensor
	Viewfinder: Colour Electronic Viewfinder ; NV-GS5 Series,GS3EN/A/ENT : Electronic Viewfinder ; NV-GS4 Series,GS3EG/EGM/B,GS1 Series
VIDEO	Recording System: Digital Component
	Television System: CCIR; 625 Lines, 50 Fields PAL Colour Signal
	Video Output Level: 1.0 Vp-p, 75Ω S-Video Output Level: Y Output; 1.0 Vp-p, 75Ω C Output; 0.3 Vp-p, 75Ω (NV-GS5 Series,GS3EN/A/ENT) Video Input Level: 1.0 Vp-p, 75Ω S-Video Input Level: Y Input; 1.0 Vp-p, 75Ω C Input; 0.3 Vp-p, 75Ω
AUDIO	Recording System: PCM Digital Recording 16 bit (48 kHz/2 ch) 12 bit (32 kHz/4 ch)
	Audio Output Level (Line): 316 mV, 600Ω Audio Input Level (Line): 316 mV, 10 kΩ or more ; NV-GS5 Series,GS3EN/A/ENT Mic Input: Mic sensitivity -50dB(0dB=1V/Pa,1kHz) (Stereo Mini Jack)
CARD MEMORY FUNCTIONS (NV-GS5 Series, GS4 Series)	Recording Media: SD Memory Card, MultiMediaCard Image Compression: JPEG Video Compression: MPEG4 ; NV-GS5 Series Still Image Size: VGA Recording; 640 X 480 Sound Compression: G.726 ; NV-GS5 Series

ITEM	SPECIFICATION
STANDARD ILLUMINATION	1,400 lx
MINIMUM REQUIRED ILLUMINATION	1 lx (Colour Night View Mode)
USB / Mini System Ⓔ (NV-GS5 Series, GS4 Series	Card reader / writer function, USB 2.0 compliant (maximum 12Mbps) No copyright protection support / Mini System editing terminal
DIGITAL STILL PICTURE	Digital Still Picture Output, Control Signal Input / Output (Transfer rate: max. 115 kbps)
DIGITAL INTERFACE	DV Input/Output Terminal (IEEE1394, 4-pin) ; NV-GS5 Series,GS3 Series DV Output Terminal (IEEE1394, 4-pin) ; NV-GS4 Series,GS1 Series
MICROPHONE	Stereo
SPEAKER	1 round speaker ϕ20 mm
OPERATING TEMPERATURE	0 - 40 ˚C
OPERATING HUMIDITY	10 - 80 %
WEIGHT	Approx. 470 g(without Battery and DV Cassette) Approx. 550 g(with CGR-D08R and DVM60)
DIMENSIONS	Approx. 68 (W) x 89 (H) x 114 (D) mm
STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack Unit 1 pc. DC Cable 1 pc. AC Cord 1 pc. AC Cord ; NV-GS5EN/ENT,GS3EN/ENT 1 pc. AV Cable 1 pc. Remote Controller 1 pc. Bottom-type Battery 1 pc. Head Cleaner ; NV-GS5EN/A/ENT,GS3EN/A/ENT 1 pc. Hood Cap Unit 1 pc. Hood Strap 1 pc. Driver Soft ; NV-GS5 Series,GS4 Series,GS3EN/A/ENT 1 pc. USB Connection Cable ; NV-GS5 Series,GS4 Series 1 pc. SD Card ; NV-GS5 Series,GS4 Series 1 pc. Shoulder Belt 1 pc. Interface Cable ; NV-GS3EN/A/ENT 1 pc. Universal Remote Controller

Weight and dimensions are approximate values.
Specifications may change without prior notice.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 INTRODUCTION

1.1. INTRODUCTION

This service manual contains technical information which will allow service personnel´s to understand and service this model.Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

Information for Q-Mechanism should be referd to the another manual as below.

Order No. : VMD0109026C8

Note 1:

These movie cameras use AC Adaptor is VSK0581-A.

The service manual for AC Adaptor is separate volume.

Order number for AC Adaptor .....VSK0581-A : VMD0105013C8

Note 2:

1) This service manual does not contain the following information, because of the impossibility of sevicing at component level.

1. Schematic Diagram, Block Diagram and C.B.A. layout of Main C.B.A./ Sub C.B.A.
2. Parts List for individual parts of Main C.B.A./ Sub C.B.A.
3. Exploded View and Parts List for individual parts of Mechanism Unit.

2) The following category is/are recycle module part. Please send it/them to Central Repair Center.

*Main C.B.A. (VEP03G17B: NV-GS5 SERIES, VEP03G17F: NV-GS4 SERIES, VEP03G17D: NV-GS3EG/EGM/B, VEP03G17C: NV-GS3EN/A/ENT, VEP03G17E: NV-GS1 SERIES)

*Sub C.B.A. (VEP03G18B: NV-GS5 SERIES, VEP03G19D: NV-GS4 SERIES, VEP03G18C: NV-GS3EN/A/ENT)

When a part replacement is required for repairing each Main C.B.A. and/ or Mechanism block, replace the assembly parts.
(Main C.B.A., Sub C.B.A. and/ or Mechanism Unit)

The following circuits are contained in Main C.B.A.

1. Main Connection Circuit
2. Drive Circuit
3. Video 1 Circuit
4. Video 2 Circuit
5. Control Circuit
6. Camera Circuit
7. Lens Drive Circuit
8. LCD Circuit
9. Head/ Rec Amp Circuit
10. Power Circuit

The following circuits are contained in Sub C.B.A. (NV-GS5 SERIES, NV-GS4 SERIES, NV-GS3EN/A/ENT)

1. Sub Connection Circuit
2. Ex Input Circuit
3. DSC MPEG Circuit
4. DSC JPEG Circuit
5. SD Audio Circuit

1.2. FEATURE COMPARISON CHART

FUNCTION	GS5	GS4	GS3		GS1
	EG/EGM/B/EN/A/ENT	EG/EGM/B	EG/EGM/B	EN/A/ENT	EG/EGM/B
Card Function (Multi Media Card, SD Card)	●	●	—	—	—
External DV/ VIDEO Input	●	—	—	●	—
MPEG4/ JPEG recording	MPEG4	JPEG	—	—	—

2 CAUTION FOR AC CORD (VJA0940 TYPE)

2.1. INFORMATION FOR YOUR SAFETY

IMPORTANT

Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

FOR YOUR SAFETY

DO NOT REMOVE THE OUTER COVER

To prevent electric shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

2.2. CAUTION FOR AC MAINS LEAD

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amperes and it is approved by ASTA or BSI to BS1362

Check for the ASRA mark or the BSI mark on the body of the fuse.

ASTA mark	BSI mark

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

If the fitted moulded plug is unsuitable for the socket outlet in your home then the fuse should be removed and the plug cut off and disposed of safety.

There is a danger of severe electrical shock if the cut off plug is inserted into any 13-ampere socket.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt, please consult a qualified electrician.

2.2.1. Important

The wires in this mains lead are coloured in accordance with the following code:

Blue	Neutral
Brown	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

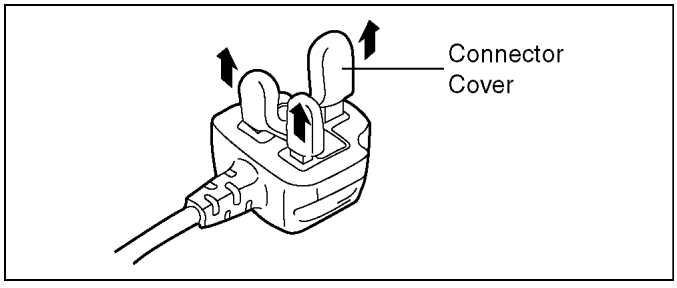
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol.

Earth Symbol	⏚

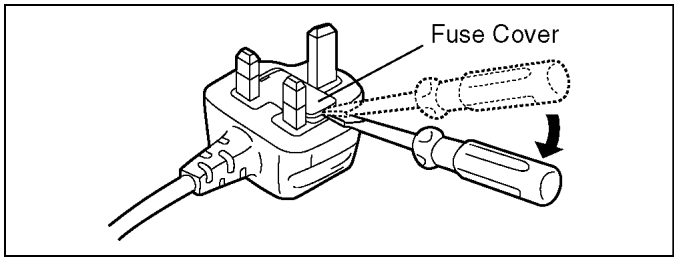
2.2.2. Before use

remove the Connector Cover as follows.

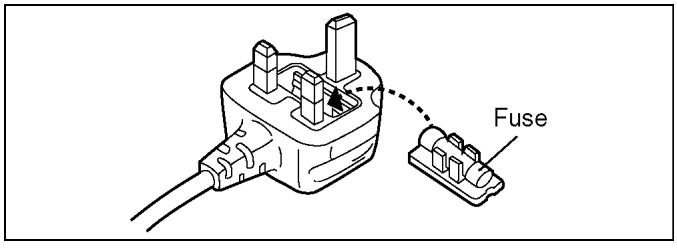


2.2.3. How to replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse cover.



3 SERVICE CAUTION

3.1. EEPROM DATA FOR SPARE PARTS OF THE MAIN C.B.A.

When the Main C.B.A. is replaced, the fixed and average data must be changed by Tatsujin kit according to the Movie Camera's suffix.

Then, confirm and/or adjust the VTR and Camera section one by one.

3.2. SERVICE EXTENSION CABLES.

This models is required the following extension cables for all connections.

Note 1:

Use the following extension cables when checking or adjusting individual circuit boards except module Parts.

(Main C.B.A. and Sub C.B.A.)

Ref.	Part No.	Pin	Part Name	Connection	Q'ty	Remarks
(1)	VFK1595D1425	14	Flat Cable	PP201 (Main) - PS291 (CCD)	1	as NV-DS15
(2)	VFK1443	18	Flat Cable	FP701 (Main) - Lens Unit	1	as NV-DS99
(3)	VFK1459	39	Flat Cable	FP6504 (Main) - FP6201 (Jack)	1	as NV-EX1
(4)	VFK1492	26	Flat Cable	FP601 (Main) - FP903 (Monitor)	1	as NV-DS9
(5)	VFK1442	21	Flat Cable	FP6501 (Main) - FP6301 (Side L)	1	as NV-DS77
(6)	VFK1452	17	Flat Cable	FP6502 (Main) - Rear Operation	1	as NV-DS77
(7)	VFK1364	14	Flat Cable	FP1001 (Main) - Battery Catcher	1	as NV-DS55
(8)	VFK1443	18	Flat Cable	FP6503 (Main) - VTR Operation	1	as NV-DS99
(9)	VFK1286	16	Flat Cable	FP603 (Main) - FP801 (EVF)	1	as NV-DX100
(9)	VFK1441	8	Flat Cable	FP603 (Main) - FP801 (B/W EVF)	1	as NV-DS77
(10)	VFK1364	14	Flat Cable	FP6505 (Main) - FP4801 (Front)	1	as NV-DS55
(11)	VFK1440	10	Flat Cable	FP3401 (Sub) - FP6202 (Jack)	1	as NV-DS77

How to use extension cables.

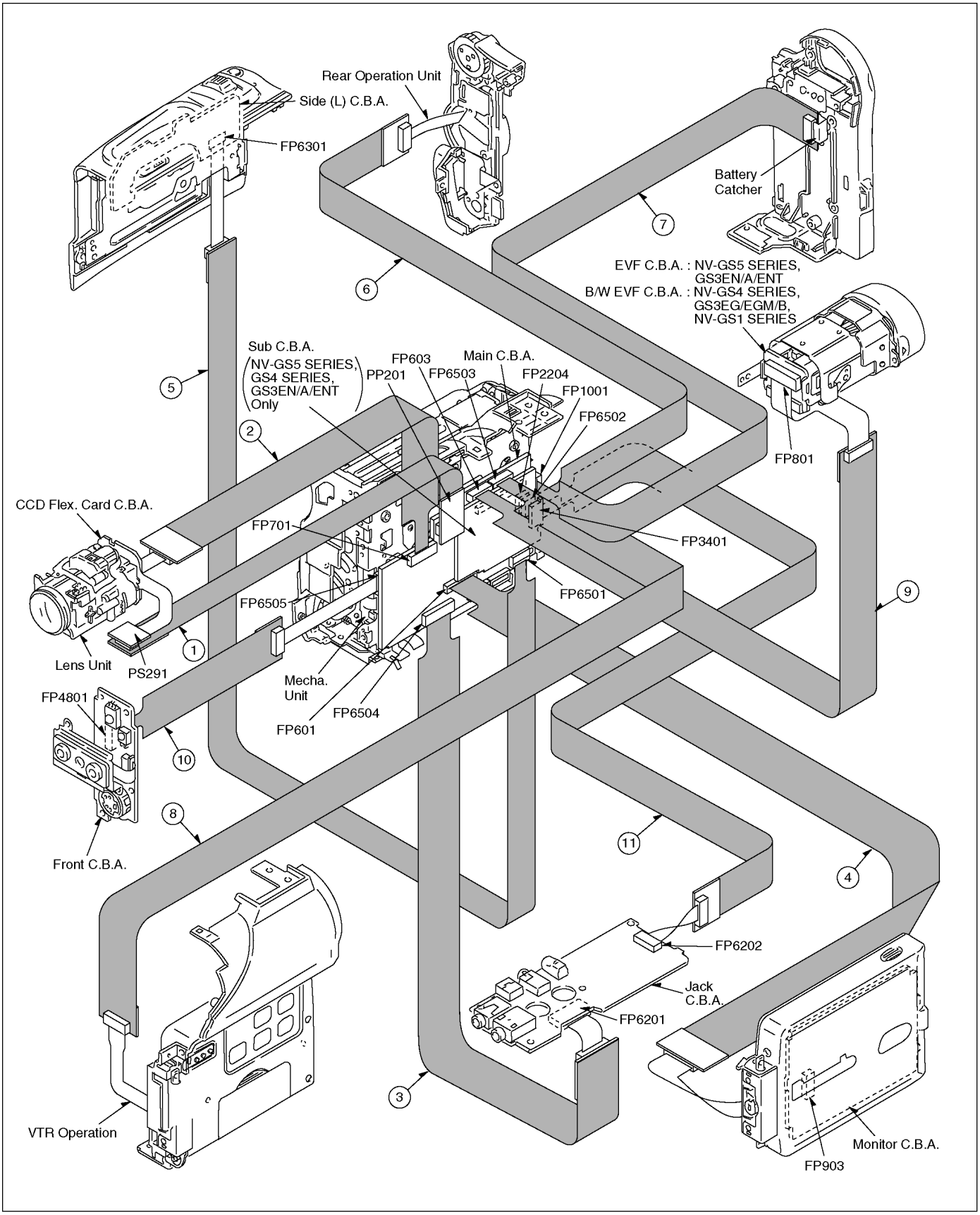
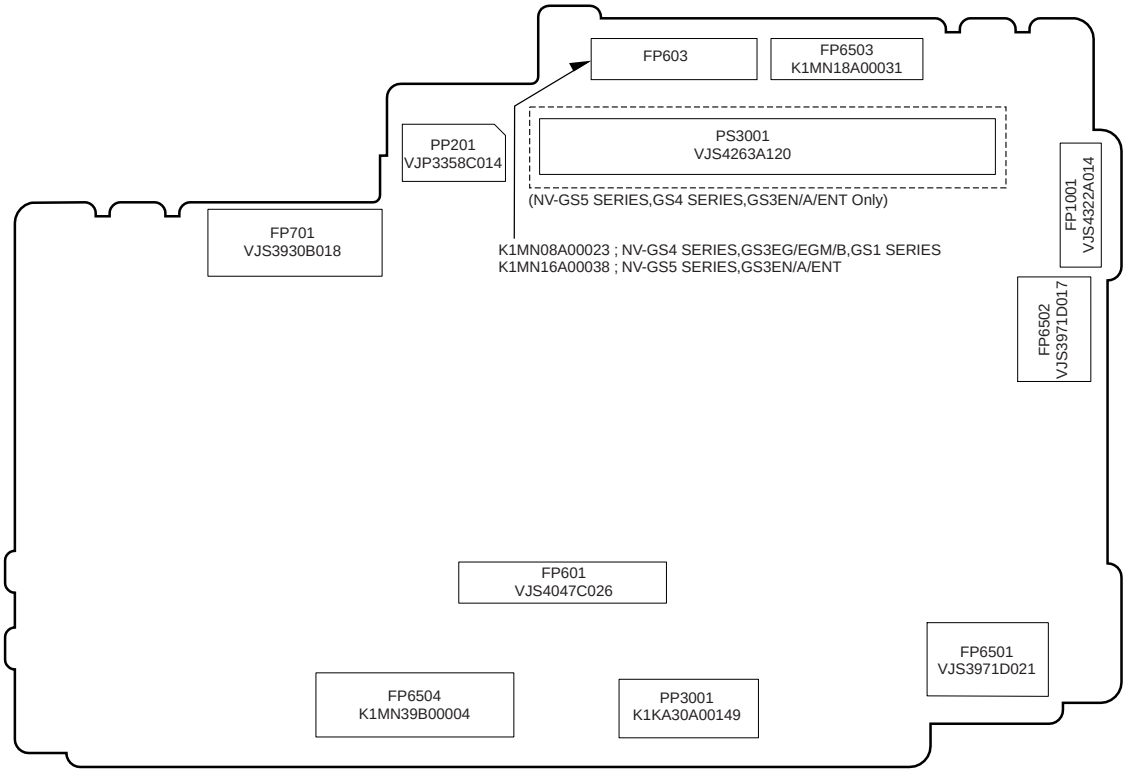


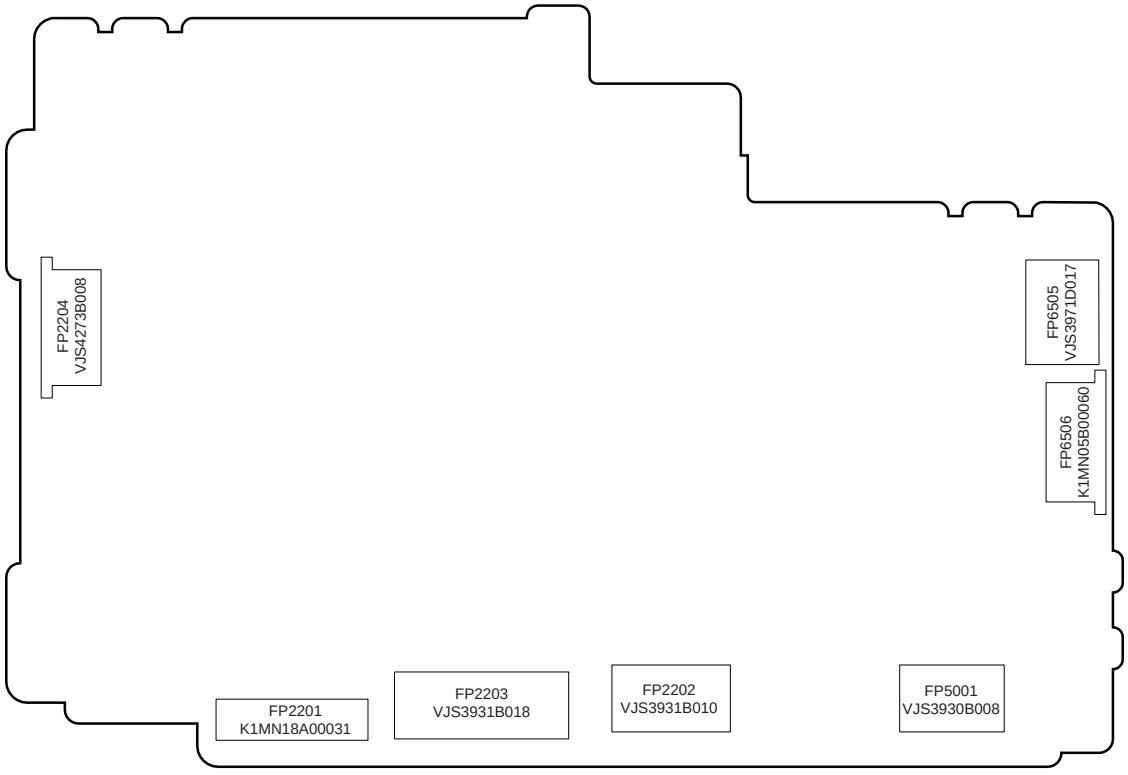
Fig. T1-1

3.3. LOCATION FOR SPARE CONNECTORS OF THE MAIN C.B.A. & SUB C.B.A.

3.3.1. MAIN C.B.A.

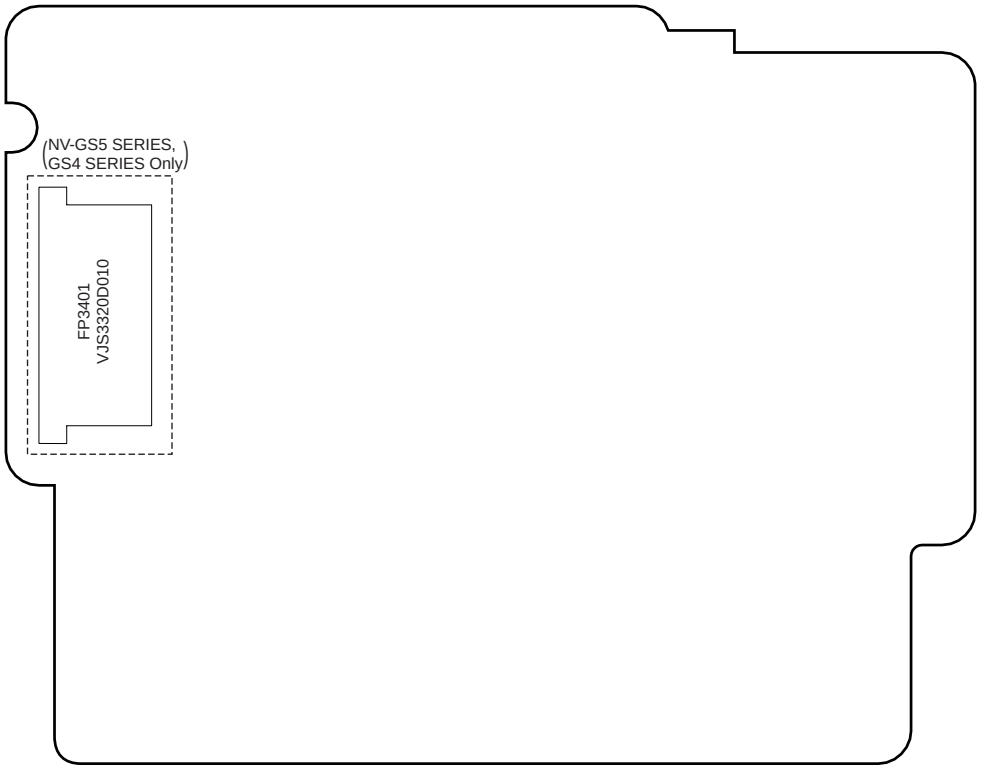


(COMPONENT SIDE)

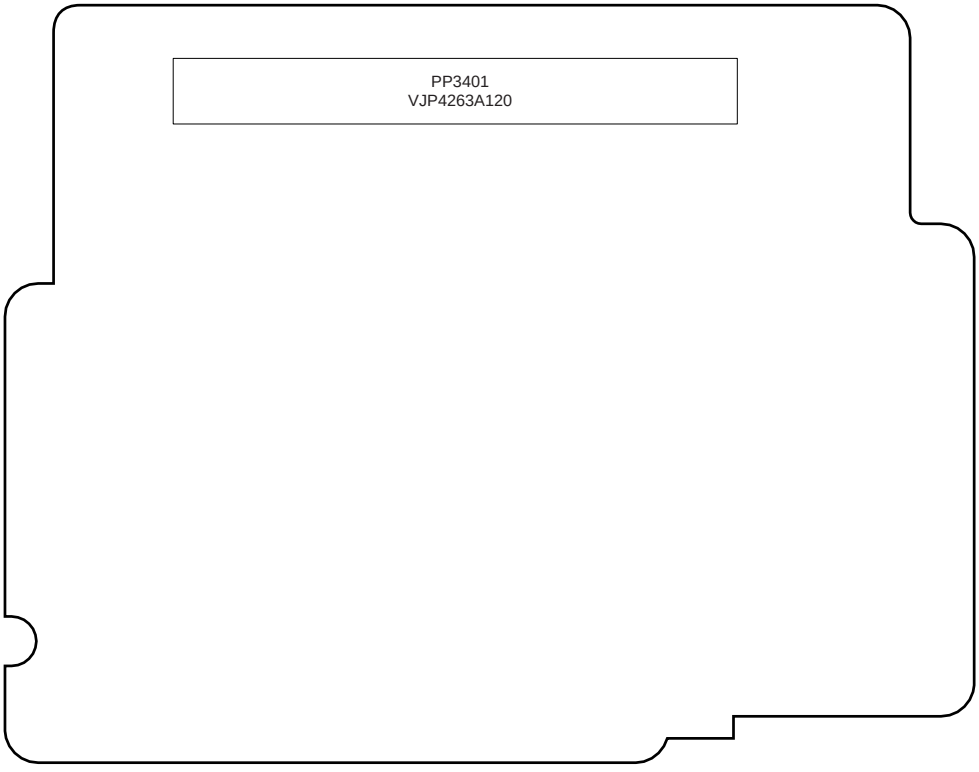


(FOIL SIDE)

3.3.2. SUB C.B.A. (NV-GS5 SERIES, GS4 SERIES, GS3EN/A/ENT ONLY)



(COMPONENT SIDE)



(FOIL SIDE)

4 PREPARATION FOR ELECTRICAL ADJUSTMENT

1. Unlock the locking tab and remove the EVR connector as shown in Fig. E1.
2. Then connect the following cables as shown in Fig. E2.

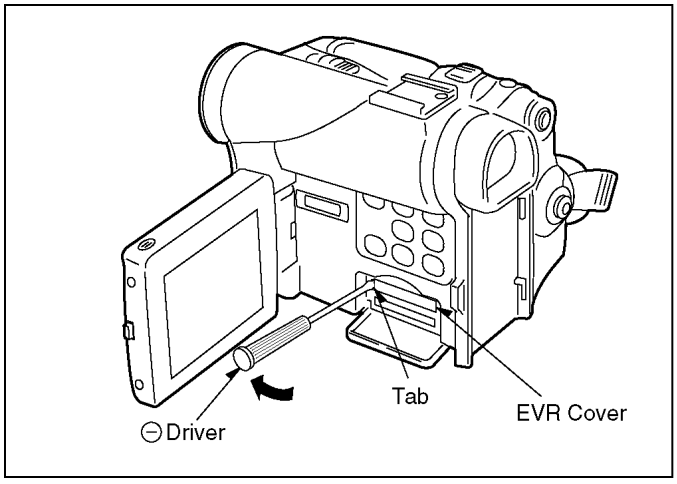


Fig. E1

Part No.	Part Name	Q'ty	Remarks
VFK1395	232C(M3.5)I/F Cable	1	
VFK1308E	Measuring Board	1	
VFK1309	EVR Connector Board	1	
VFK1317 or VFK1511	30 Pin Flat Cable	2	200mm Type 300mm Type
VJA0941	DC Output Cable	1	For AC Adaptor
VFK1164TAR3A	Step up Ring	1	For Collimator
VFK1714	Connection Adaptor (30pin)	1	
VFK1763	Connection Adaptor (60-30pin)		

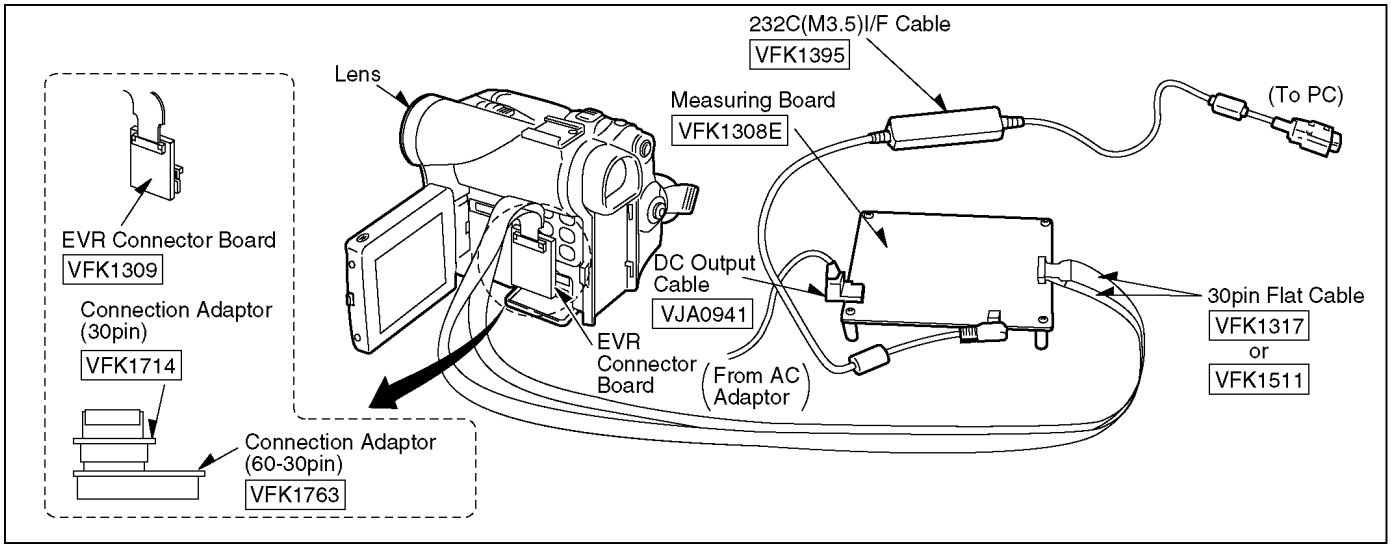


Fig. E2

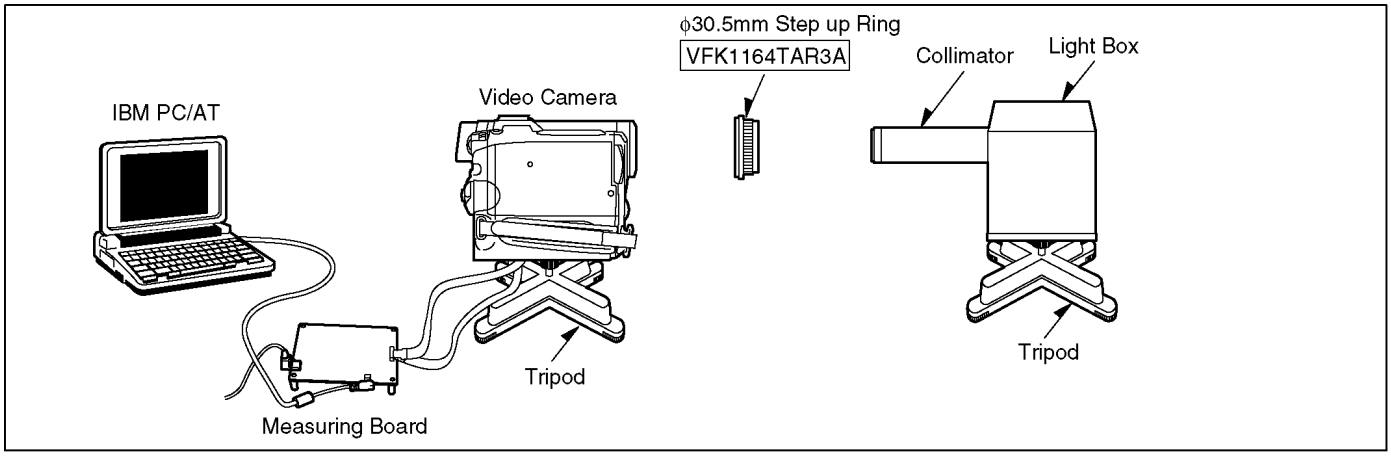


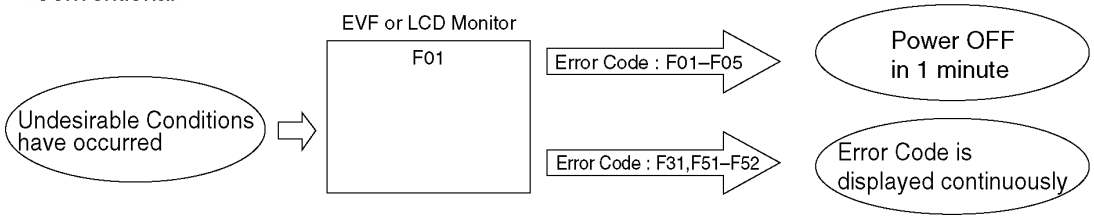
Fig. E3

5 SERVICE MODE

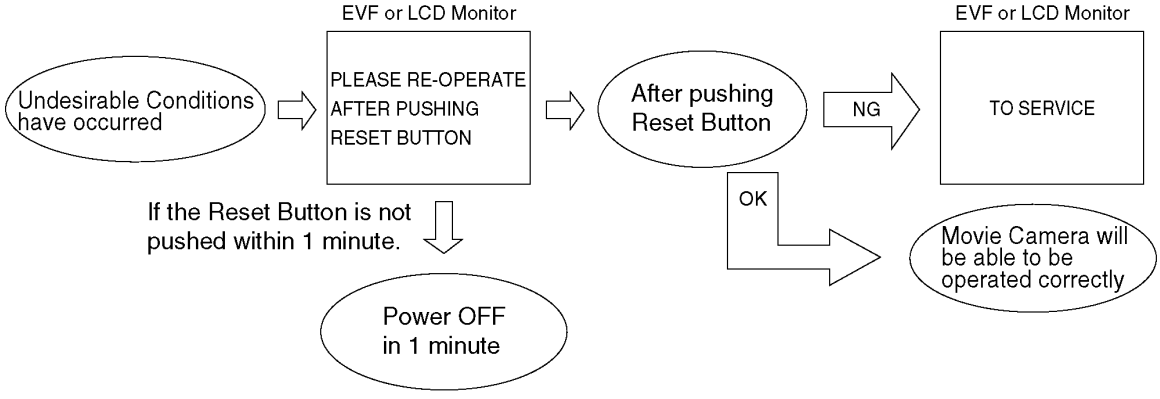
5.1. New Error Code Display

Conventionally, the error code has been displayed automatically on the EVF or LCD Monitor when undesirable conditions have occurred. With the New Error Code Display, the error code has not been displayed automatically as follows except some error codes F31(Data Transmission Error), U10(Dew) and U11(Head Clogging).

< Conventional >



< New >


EVF or LCD Monitor
Undesirable Conditions have occurred
PLEASE RE-OPERATE AFTER PUSHING RESET BUTTON
After pushing Reset Button
NG
EVF or LCD Monitor
TO SERVICE
OK
Movie Camera will be able to be operated correctly
If the Reset Button is not pushed within 1 minute.
Power OFF in 1 minute

Note:

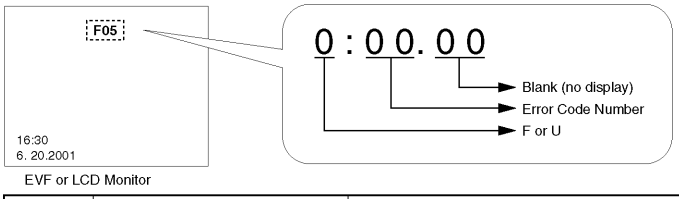
1. The only some error codes F31, U10 and U11 has displayed automatically on the EVF or LCD monitor as usual.
2. The Power LED also has been flashed for 1 min. when undesirable condetions have occurred.(See below)

5.2. Viewing Error Code

When displaying the Error Code on the EVF or LCD Monitor, push the FADE/STOP and REC START/PAUSE buttons simultaneously for more 3 seconds.

Note:

When the cassette tape is inserted, this operation will not be worked.



DISPLAY	CONDITION	POWER OFF TIMING / POWER LED FLASHING TIMING
F01	T-Reel Lock	After 1 minute flashing the LED
F02	S-Reel Lock	After 1 minute flashing the LED
F03	Unloading Lock	After 1 minute flashing the LED
F04	Loading Lock	After 1 minute flashing the LED
F05	Cylinder Lock	After 1 minute flashing the LED
F31	Data Transmission Error	Not turning OFF
F51	Zoom Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
F52	Focus Motor Lock	Not turnig OFF Power LED is flashed at 1 Hz timing
U10	Dew Detection	After 18 seconds flashing the LED Power LED is flashed at 1 Hz timing
U11	Head Clogging	Not turning OFF

6 HOW TO REPLACE THE LITHIUM BATTERY (PROCEDURE)

1. Remove the Side Case (L) C.B.A.. (Refer to Disassembly Procedures.)
2. Unsolder the Lithium Battery “VSB0407” and then replace the new one. (See Fig. B1.)

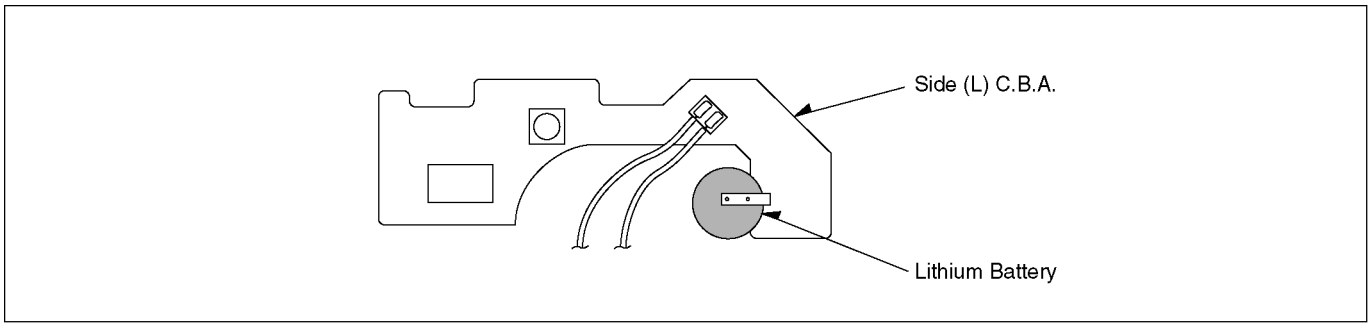


Fig. B1

Note:

The lithium battery is a critical component. (Type No.: VSB0407 Manufactured by Panasonic.)

It must never be subjected to excessive heat or discharge.

It must therefore only be fitted in equipment designed specifically for its use.

Replacement batteries must be of the same type and manufacture.

They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.

Do not attempt to re-charge the old battery or re-use it for any other purpose.

It should be disposed of in waste products destined for burial rather than incineration.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's instructions.

PRECAUTION

Le fait de remplacer incorrectement la pile peut présenter des risques d'explosion.
Remplacer la pile uniquement par une pile identique ou de type équivalent recommandée par le fabricant. Se débarrasser des piles usagées conformément aux instructions du fabricant.

VORSICHT

Bei einer falsch eingesetzten Batterie besteht Explosionsgefahr. Nur mit einer vom Hersteller empfohlenen Batterie vom gleichen Typ ersetzen.
Verbrauchte Batterien beim Fachhändler oder einer Sammelstelle für Sonderstoffe abliefern.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

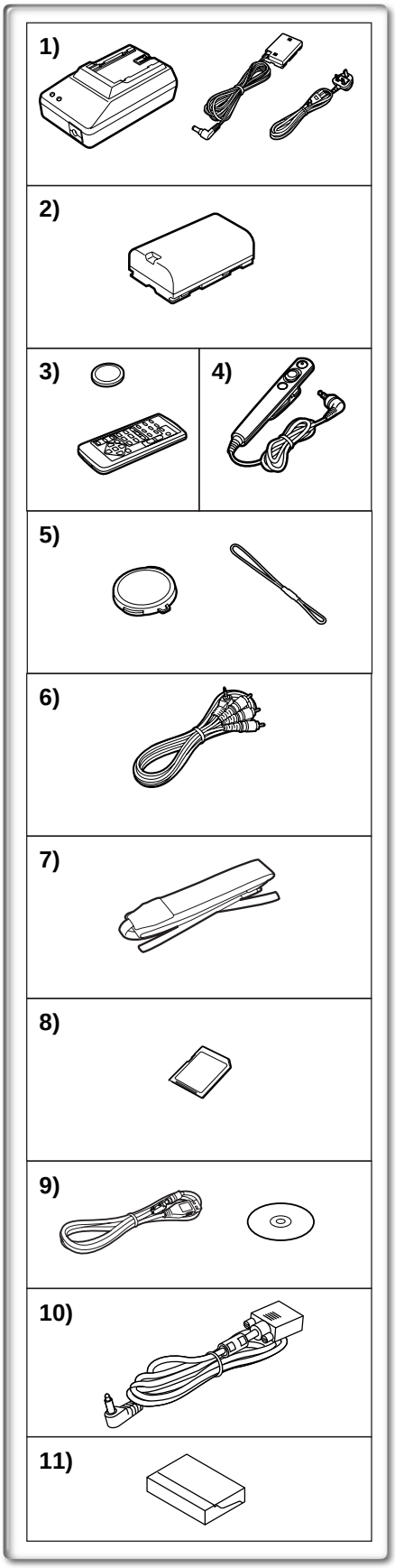
ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning má kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

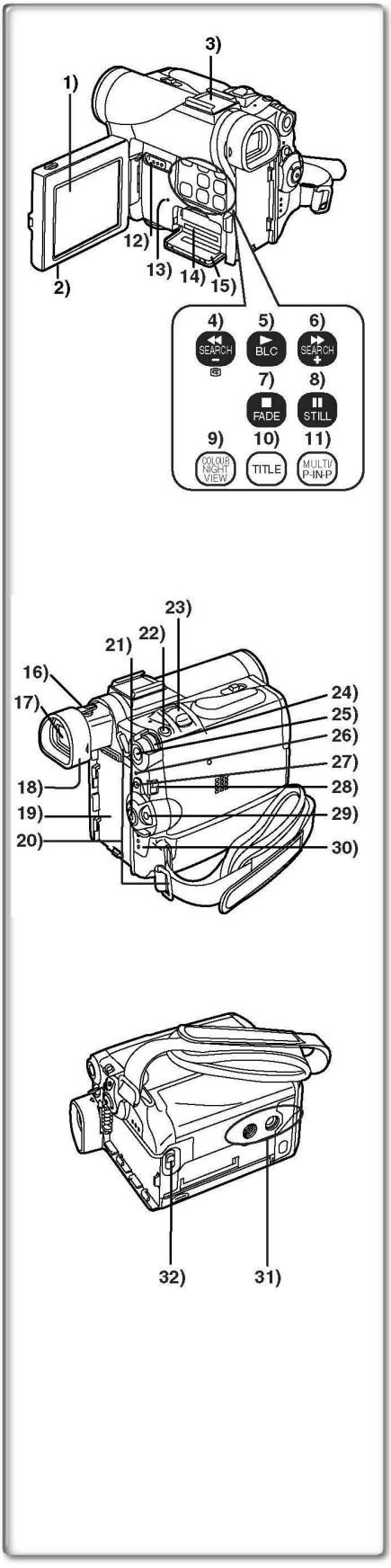
7 OPERATING GUIDE



Standard Accessories

Illustrated on the left are accessories supplied with the Movie Camera.

1) AC Adaptor, DC Input Lead and AC Mains Lead
2) Battery Pack
3) Remote Controller and Button-Type Battery
4) Free Style Controller
5) Lens Cap, Lens Cap String
6) AV Cable
7) Shoulder Strap
8) SD Memory Card (NV-GS5 Series, GS4 Series only)
9) USB Connection Cable (NV-GS5 Series, GS4 Series only)
Driver Soft (NV-GS5 Series, GS4 Series, GS3EN/A/ENT)
10) Interface Cable (NV-GS3EN/A/ENT only)
11) Head Cleaner (NV-GS5EN/A/ENT, GS3EN/A/ENT only)



Controls and Components

1) LCD Monitor

- Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD Monitor screen. However, this is not a malfunction and does not affect the recorded picture.

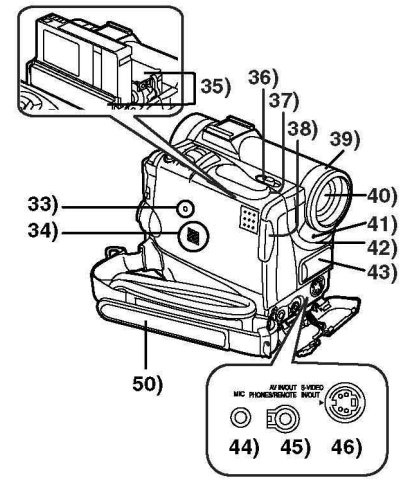
---

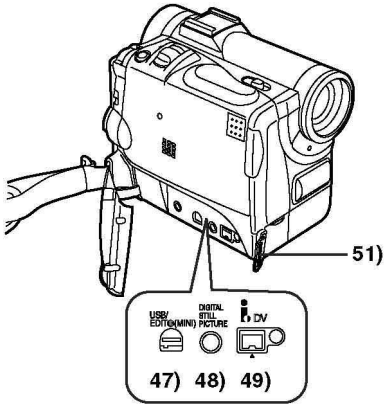
2) LCD Monitor Open Knob [OPEN▼]
3) Accessory Shoe
   - Accessories, such as a stereo microphone (VW-VMS2E; optional), are attached here.
4) Rewind/Review Button [◀◀]
   Reverse Search Button [SEARCH−]
   Recording Check Button [⟲]
5) Play Button [▶]
   Backlight Button [BLC]
6) Fast Forward/Cue Button [▶▶]
   Forward Search Button [SEARCH+]
7) Stop Button [■]
   Fade Button [FADE]
8) Pause Button [❚❚]
   Still Button [STILL]
9) Colour Night View Button [COLOUR NIGHT VIEW]
10) Title Button [TITLE] (NV-GS4/GS5 only)
11) Multi/P-in-P Button [MULTI/P-IN-P]
12) Tape/Card Photoshot Selector [TAPE/CARD]
    Tape/Card Photoshot/Card Mode Selector [TAPE/CARD/CARD MODE] (NV-GS5 only)
13) Card Access Lamp [ACCESS] (NV-GS4/GS5 only)
14) Card Slot (NV-GS4/GS5 only)
15) Card Slot Cover (NV-GS4/GS5 only)
16) Eyepiece Corrector Knob
17) Viewfinder

- Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the Viewfinder screen. However, this is not a malfunction and does not affect the recorded picture.

---

18) Eyecup
19) Battery Holder
20) Shoulder Strap Holders
21) Recording Start/Stop Button
22) Photoshot Button [PHOTO SHOT]
23) Zoom Lever [W/T]
24) Multi-Function Dial [PUSH]
25) Menu Button [MENU]
26) Quick Start Recording Lamp
27) Quick Start Recording Button [QUICK START]
28) Mode Selector Switch [AUTO/MNL/FOCUS]
29) Off/On Mode Selector Switch [OFF/ON/MODE]
30) Operation Mode Lamps [CAMERA/VCR] (NV-GS1/GS3 only)
    [CAMERA/VCR/CARD P.B] (NV-GS4/GS5 only)
31) Tripod Receptacle
    - Used for mounting the Movie Camera on an optional tripod.
32) Battery Eject Button [BATT]





33) Reset Button [RESET]
34) Speaker
35) Cassette Holder
36) Cassette Eject Lever [OPEN/EJECT]
37) Cassette Compartment Cover
38) Cassete Cover Close Button [PUSH CLOSE]
39) Lens Hood
40) Lens
41) Recording Lamp
42) White Balance Sensor
Remote Control Sensor
43) Microphone (built-in, stereo)
44) Microphone Socket [MIC]
- Connect with an external microphone or audio equipment. (When this socket is in use, the built-in microphone does not operate.)

45) Audio-Video Input/Output Socket [AV IN/OUT]
(Input function on NV-GS5 Series, GS3EN/A/ENT Model only)
Headphone Socket [PHONES]
Free Style Controller Socket [REMOTE]
- Connecting an AV Cable or Free Style Controller to this socket activates the Movie Camera's built-in speaker, but connecting a headphone, etc. deactivates it.

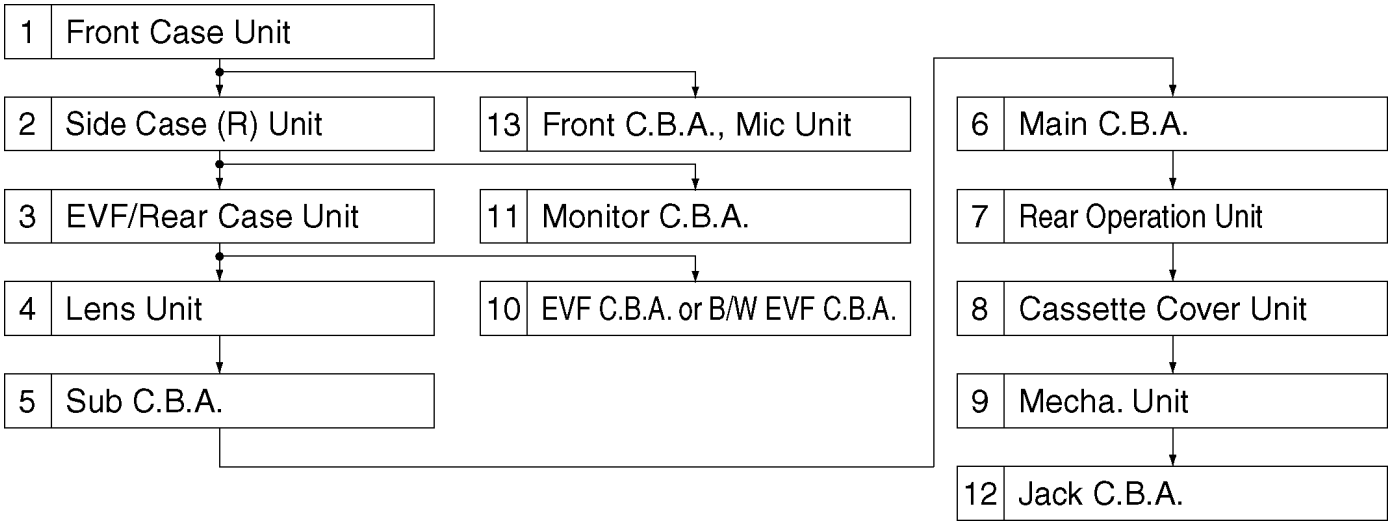
46) S-Video Input/Output Socket [S-VIDEO IN/OUT]
(Input function on NV-GS5 Series, GS3EN/A/ENT Model only)
47) USB Socket [USB] (NV-GS4/GS5 only)
Edit Socket [EDIT(MINI)]
48) Digital Still Picture Terminal [DIGITAL STILL PICTURE]
49) DV Terminal
- Connect this to the digital video equipment.

50) Grip Belt
51) Lens Cap String Holder

8 ADJUSTMENT PROCEDURES

8.1. DISASSEMBLE FLOW CHART

This flow chart indicates the disassembly steps the cabinet parts, C.B.A. and Mecha. Unit in order to access to be serviced. When reinstalling, perform the steps in the reverse order.



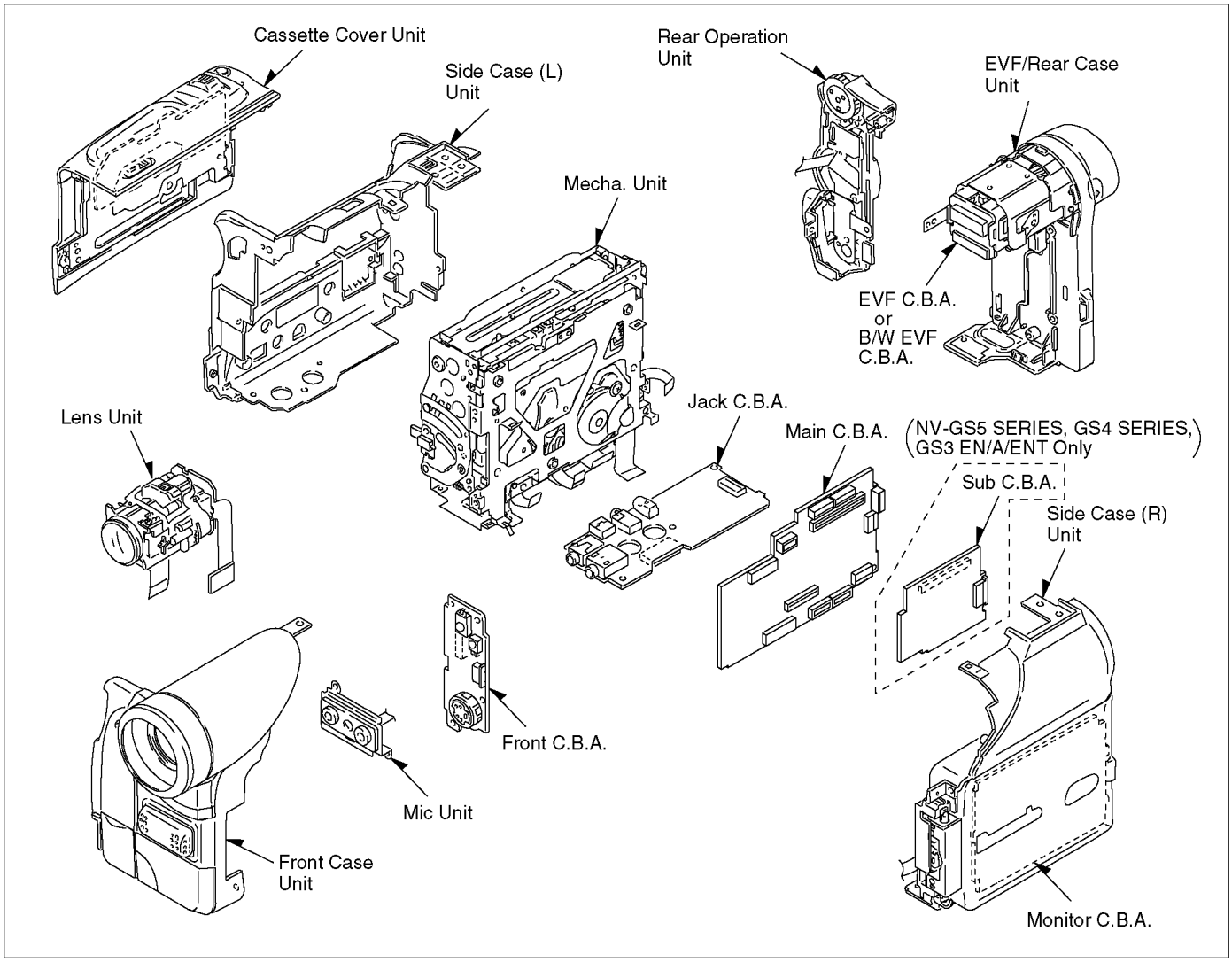


Fig. F1

8.2. DISASSEMBLY PROCEDURES

Flow-Chart for Disassembly Procedure

No.	Item/Part	Fig.	Removal (Screw,Connector,Flex. & Other)
1	Front Case Unit	Fig. D2	1-Screw (A)
		Fig. D3	1-Screw (B)
		Fig. D4	3-Screws (C) Shoe Hold Plate
		Fig. D5	2-Screws (D)
		Fig. D6	1-Connector FP4801 Front Case Unit
2	Side Case (R) Unit	Fig. D7	2-Screws (E)
		Fig. D8	2-Screws (F)
		Fig. D9	2-Tabs 2-Connectors FP601,FP6503 Side Case (R) Unit
3	EVF / Rear Case Unit	Fig. D10	1-Screw (G)
		Fig. D11	1-Screw (H)
		Fig. D12	1-Screw (I) 2-Connectors FP603,FP1001 EVF / Rear Case Unit
		Fig. D13	Eye Cap 1-Screw (K) 2-Tabs EVF View Adj. Unit 2-Screws (J) EVF Unit / Rear Case Unit
4	Lens Unit	Fig. D14	1-Screw (L) 1-Tab 2-Connectors FP701,PP201 1-Screw (M) Lens Frame (L) , Lens Unit
5	Sub C.B.A. (NV-GS5 Series,GS4 Series,GS3EN /A/ENT Only)	Fig. D15	1-Connectors FP3401 (NV-GS5 Series, GS4 Series Only) 1-Connectors PS3001 Sub C.B.A.
6	Main C.B.A.	Fig. D16	1-Screw (N) 6-Connector FP2204,FP6501,FP6502,FP6504,FP6505,FP6506 2-Tabs 4-Connectors FP2001,FP2202,FP2203,FP5001 Main C.B.A.
7	Rear Operation Unit	Fig. D17	Jack Cover (L) Open 1-Screw (O) 1-Screw (P) 1-Screw (Q) 1-Screw (R) Rear Operation Unit
8	Cassette Cover Unit	Fig. D18	Cassette Cover Open 1-Screw (S) 1-Screw (U) 2-Screws (T) Cassette Door Lock Button,Cassette Cover Unit
9	Mecha. Unit	Fig. D19	3-Screws (V) 3-Screws (W) 4-Tabs Mecha. Frame Unit / Mecha. Unit
10	EVF C.B.A. (NV-GS5 Series,GS3EN /A/ENT Only)	Fig. D20	1-Connector FP801 EVF Flex. Slide Case Holder,Slide Case 2-Screws (X) 4-Tabs EVF Frame,EVF Click Spring,EVF Unit
		Fig. D21	1-Connector FP802 2-Taabs EVF C.B.A.
	B/W EVF C.B.A. (NV-GS4,GS3EG/EGM/B,GS1 Series Only)	Fig. D22	1-Connector FP801 B/W EVF Flex. Slide Case Holder,Slide Case 2-Screws (X) 4-Tabs EVF Frame,EVF Click Spring,B/W EVF Unit
		Fig. D23	1-Connector FP802 2-Tabs B/W EVF C.B.A.
11	Monitor C.B.A.	Fig. D24	2-Screws (Y) LCD Unit
		Fig. D25	2-Screws (Z) 2-Screws (a) 6-Tabs LCD Case (Upper) Unit 1-Connector FP903 LCD Hing Unit 1-Connector FP901
		Fig. D26	LCD Unit
		Fig. D27	2-Solder Portion 3-Tabs Monitor C.B.A.
12	Jack C.B.A.	Fig. D28	4-Screws (b) 1-Screw (c) Side Case (L) Unit Grip Belt Angle (L) 1-Connector FP6202 (NV-GS5 Series,GS4 Series Only)
		Fig. D29	1-Screw (d) Tripod Plate,Tripod Piece
		Fig. D30	4-Screws (e) Jack C.B.A.
13	Front C.B.A.,Mic Unit	Fig. D31	3-Screws (f) 1-Connector FP4802 Front Earth Angle (Lower) Front C.B.A.
		Fig. D32	1-Screw (g) Mic Unit

<NV-GS5 SERIES, GS4 SERIES Only>
If the card is inserted,take out it before disassembling.

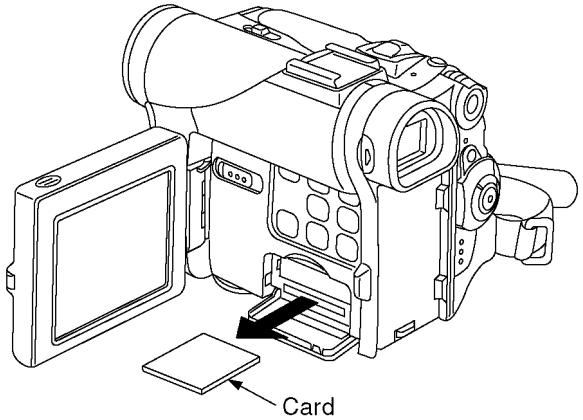


Fig. D1

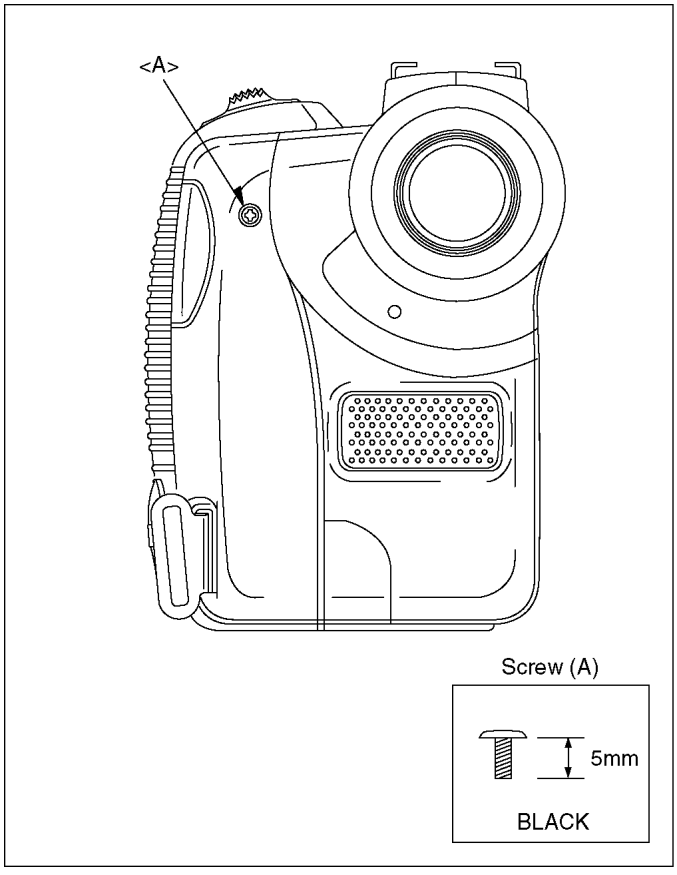


Fig. D2

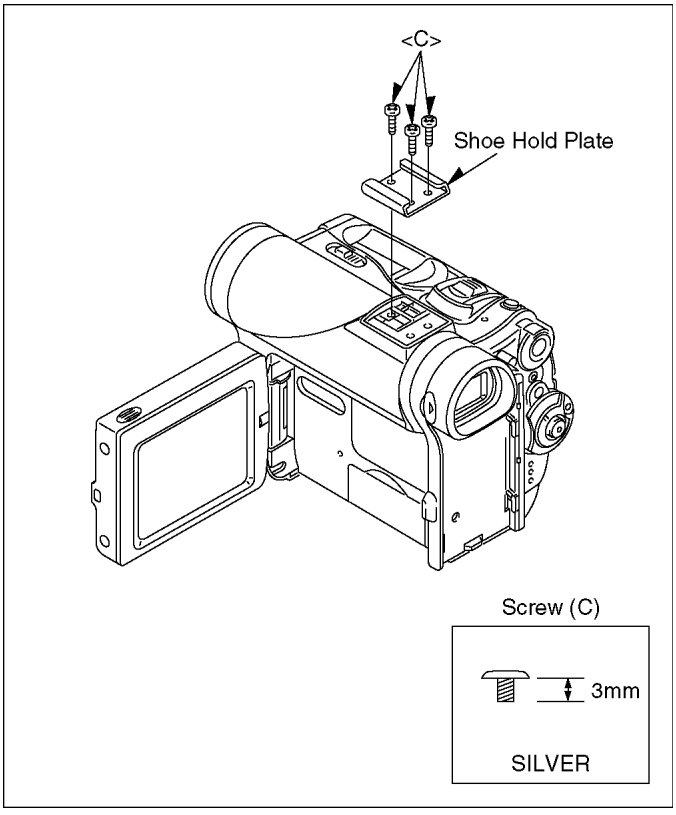


Fig. D4

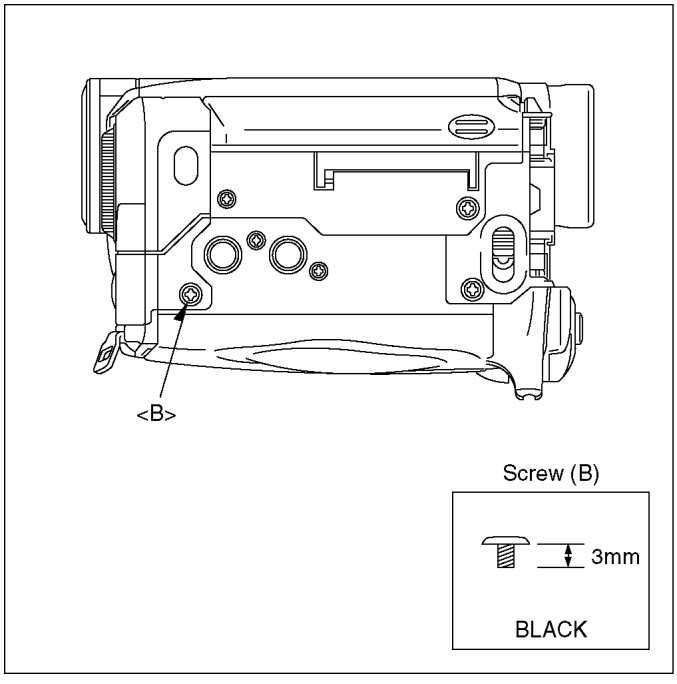


Fig. D3

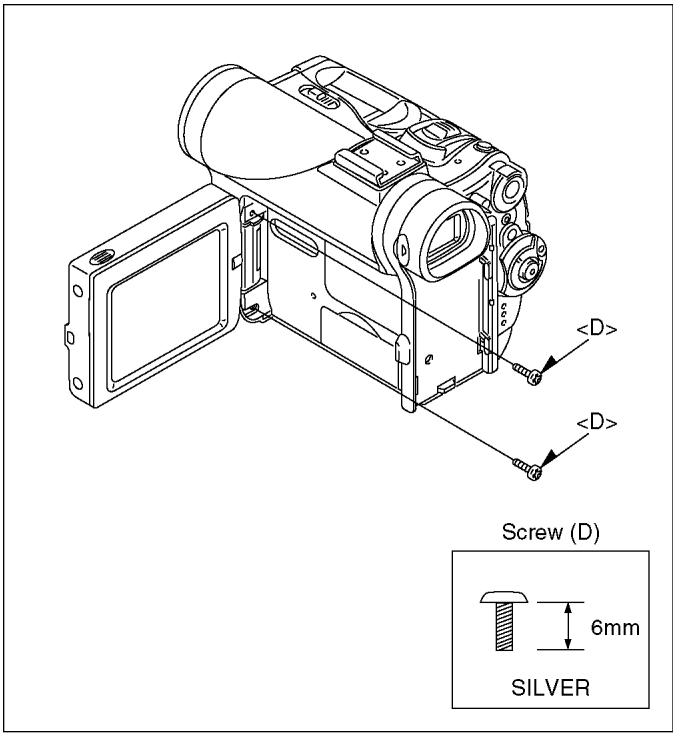


Fig. D5

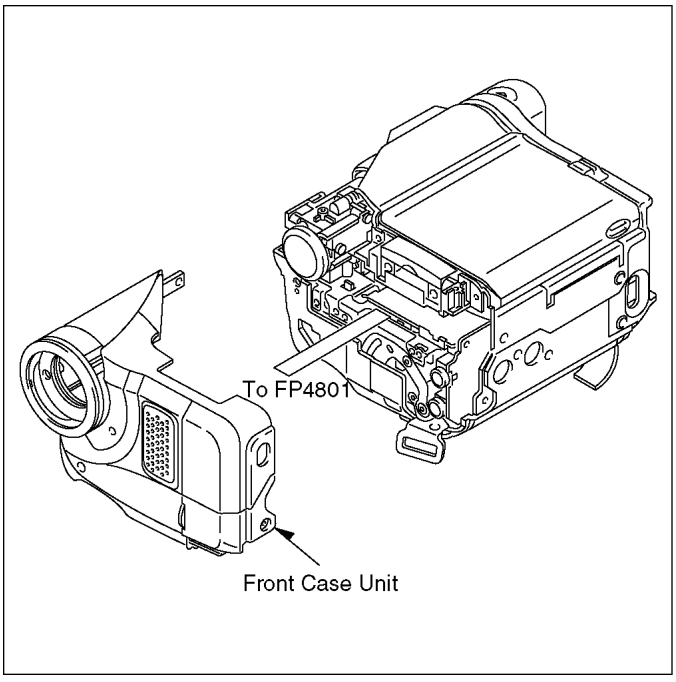


Fig. D6

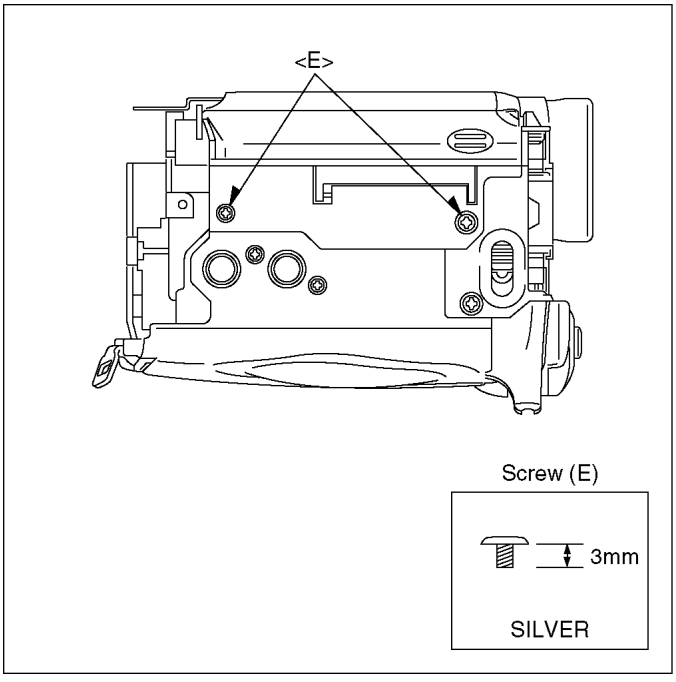


Fig. D7

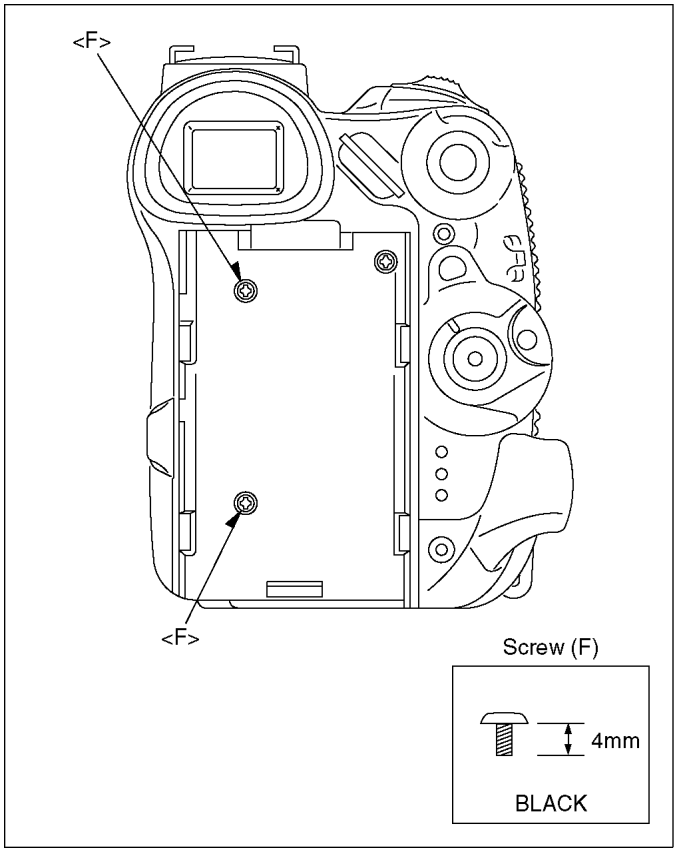


Fig. D8

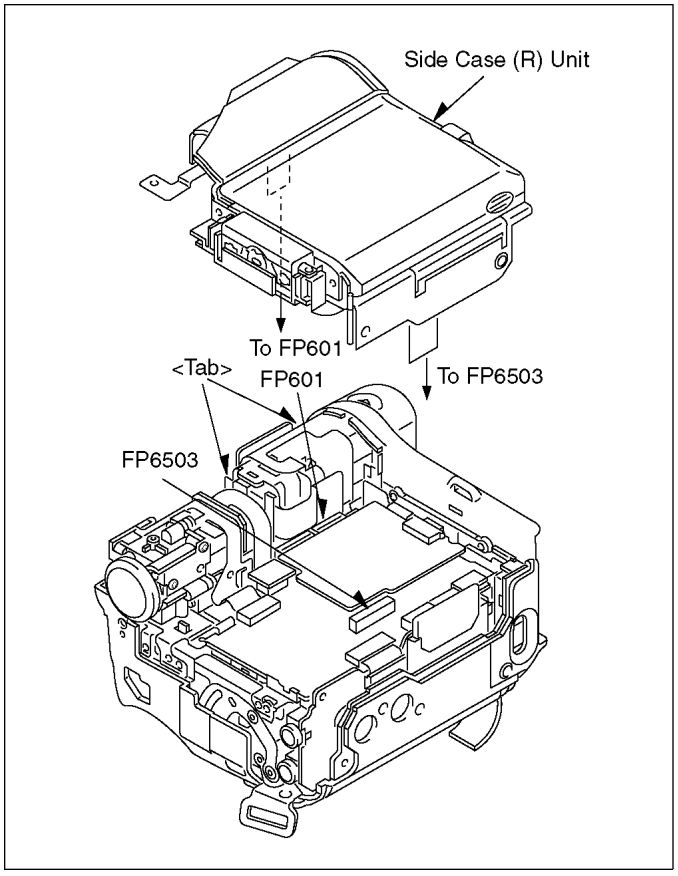


Fig. D9

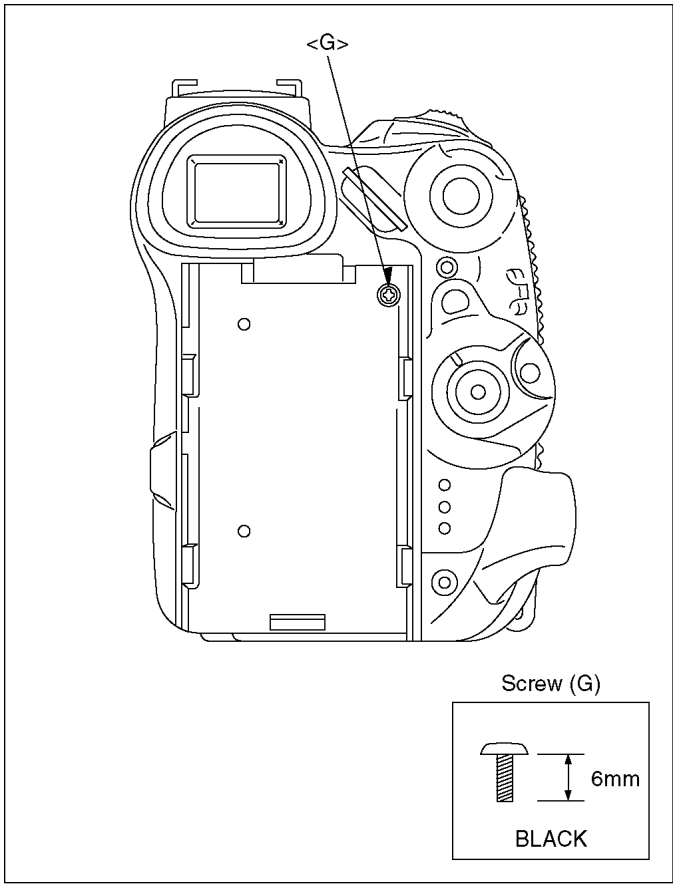


Fig. D10

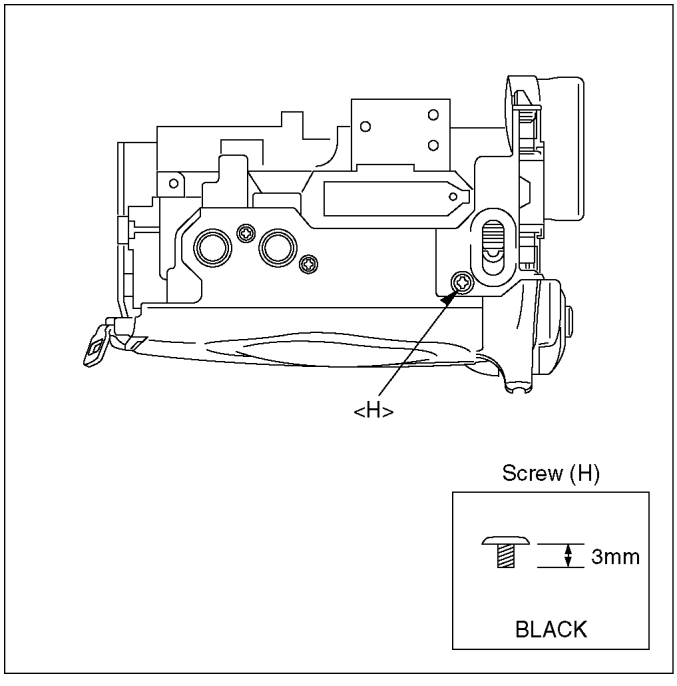


Fig. D11

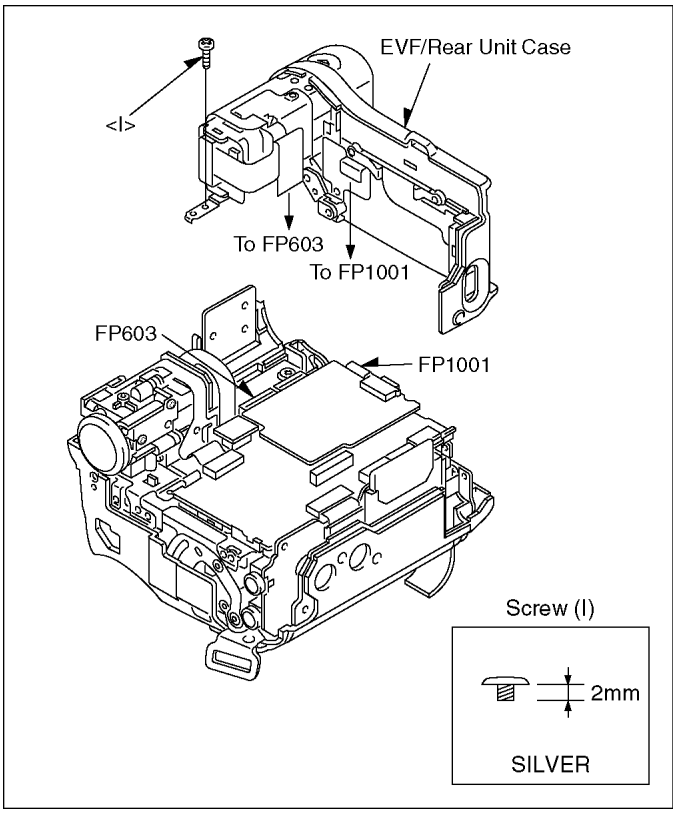


Fig. D12

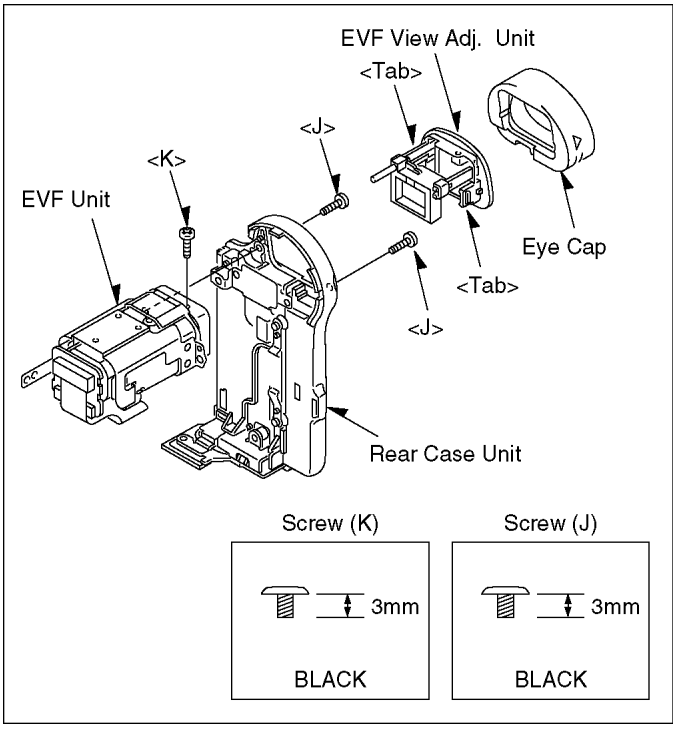


Fig. D13

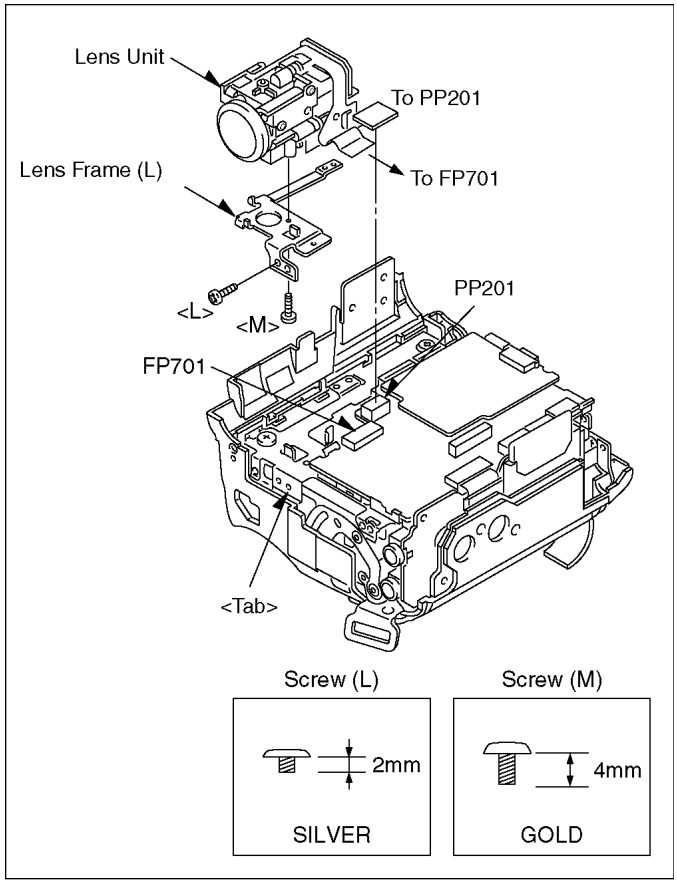


Fig. D14

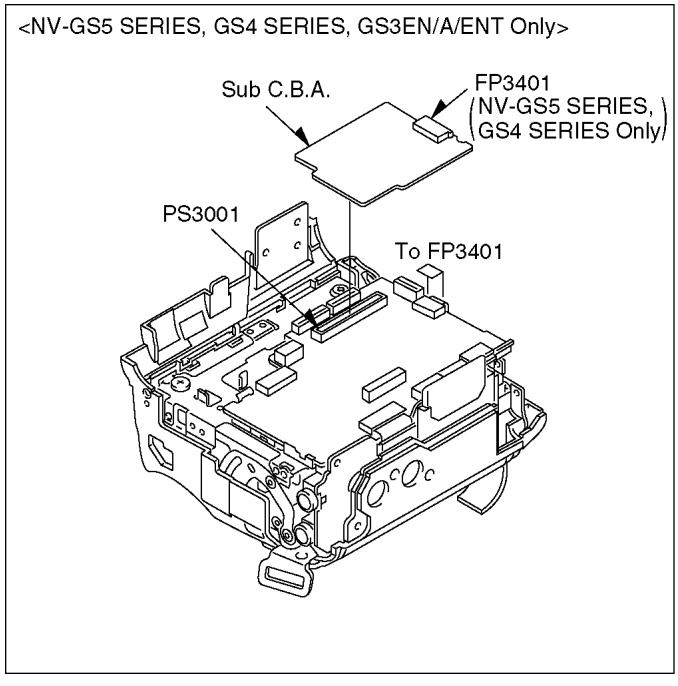


Fig. D15

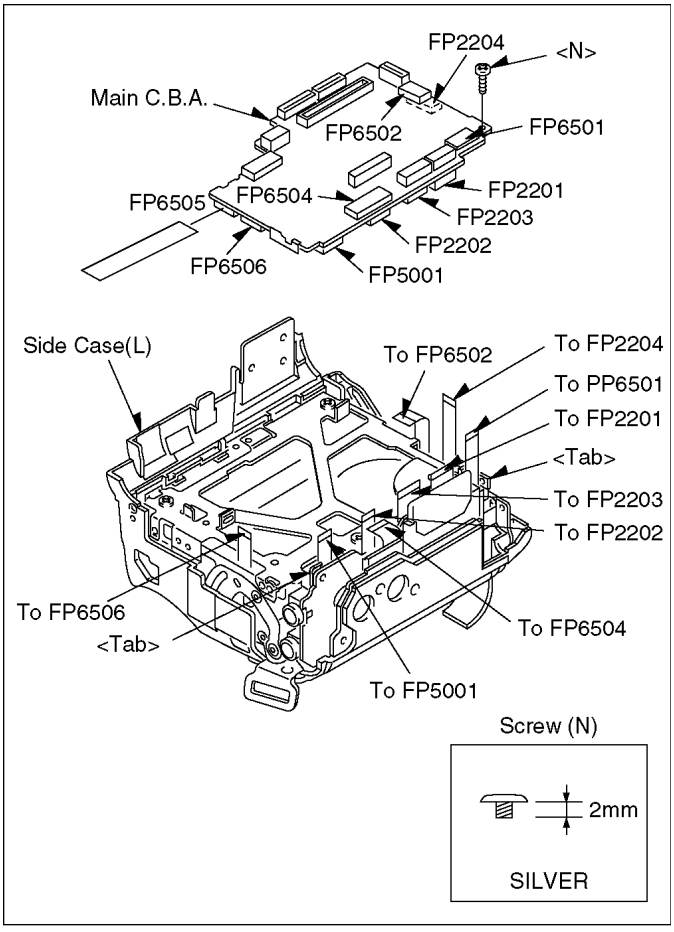


Fig. D16

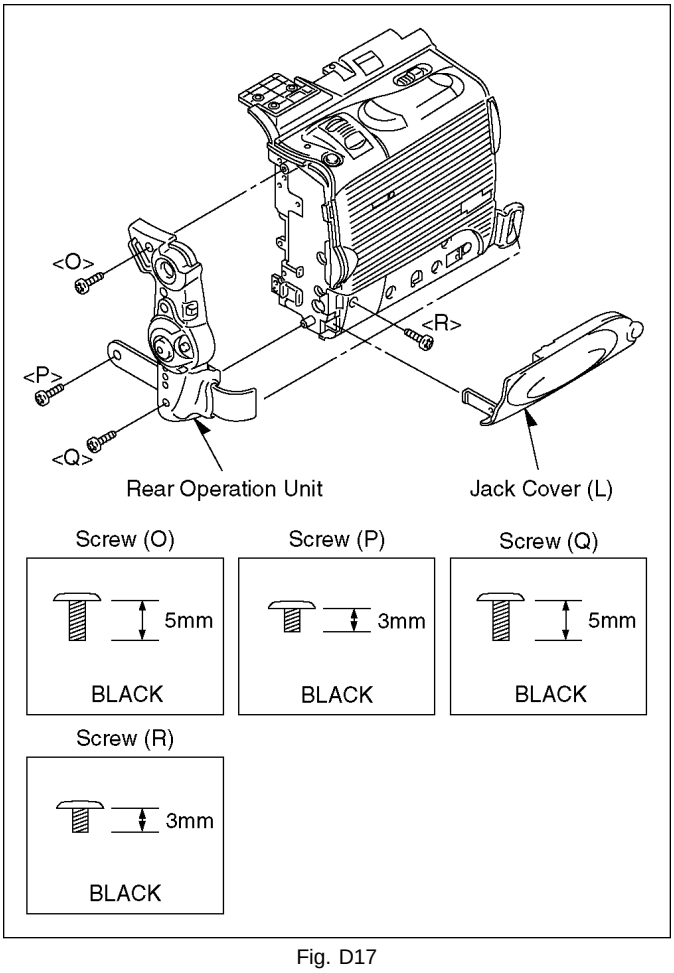


Fig. D17

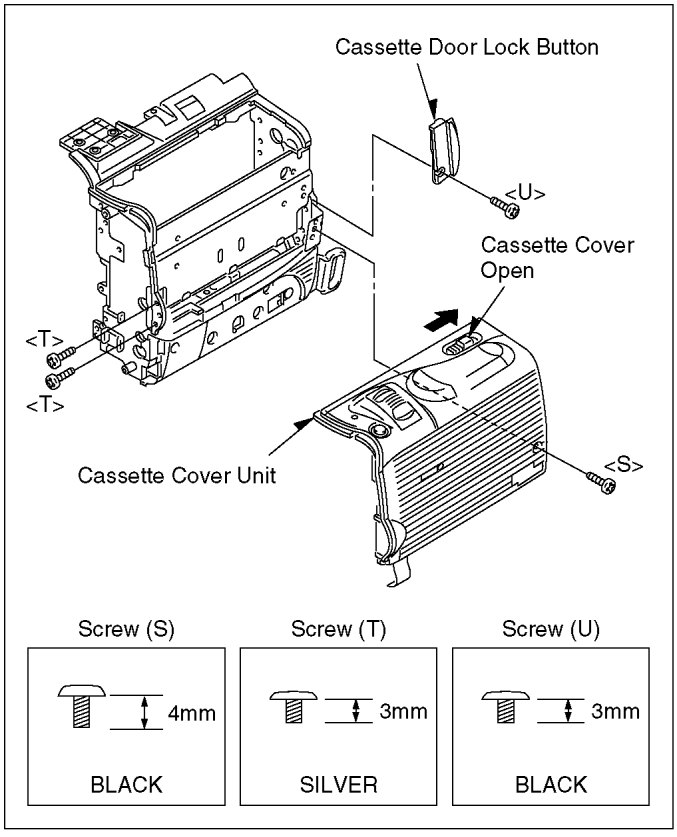


Fig. D18

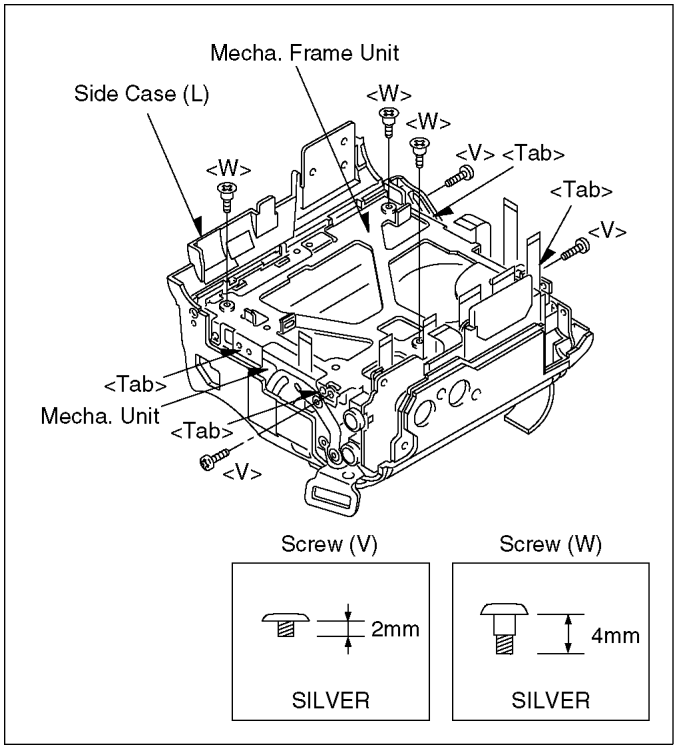


Fig. D19

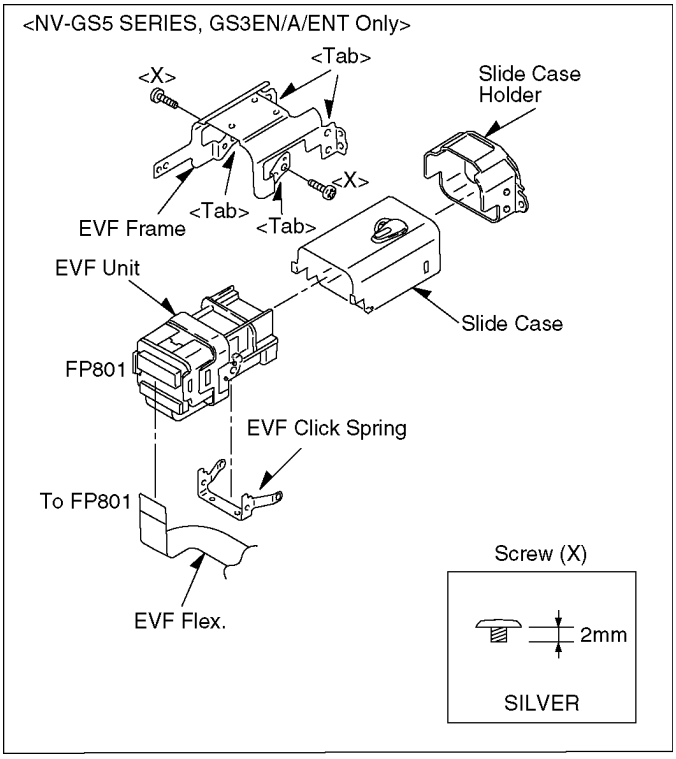


Fig. D20

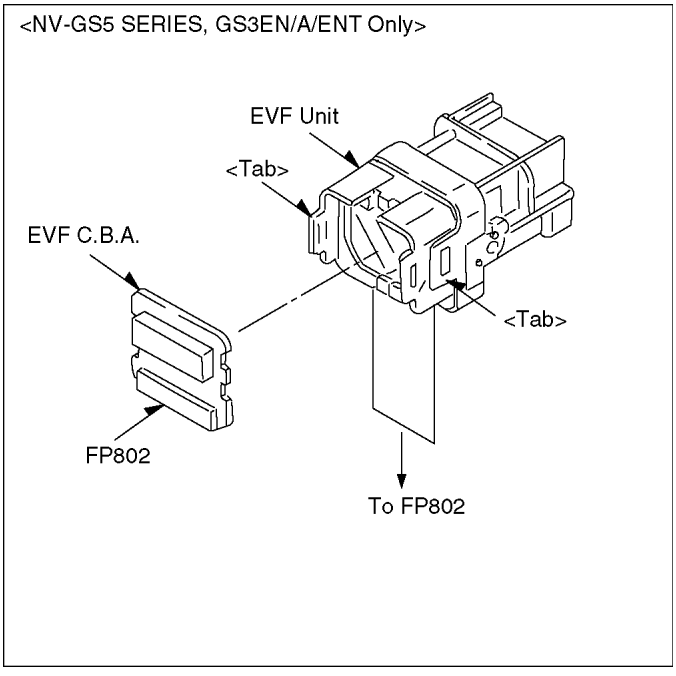


Fig. D21

<NV-GS4 SERIES, GS3 EG/EGM/B, GS1 SERIES Only>

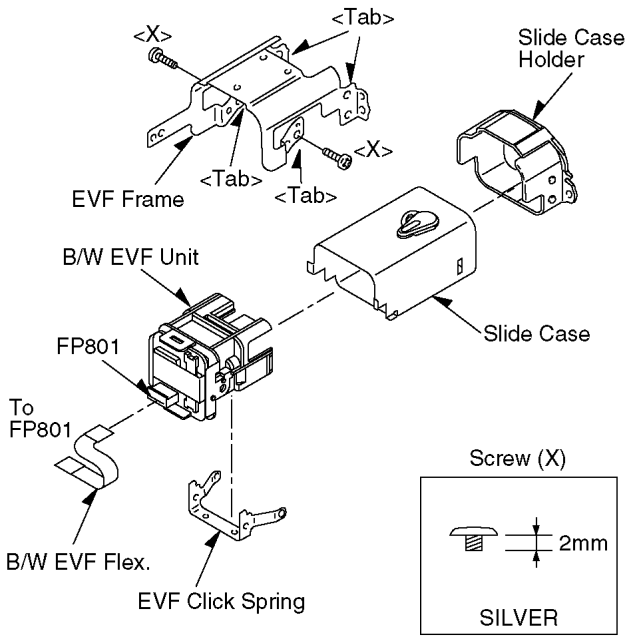


Fig. D22

<NV-GS4 SERIES, GS3 EG/EGM/B, GS1 SERIES Only>

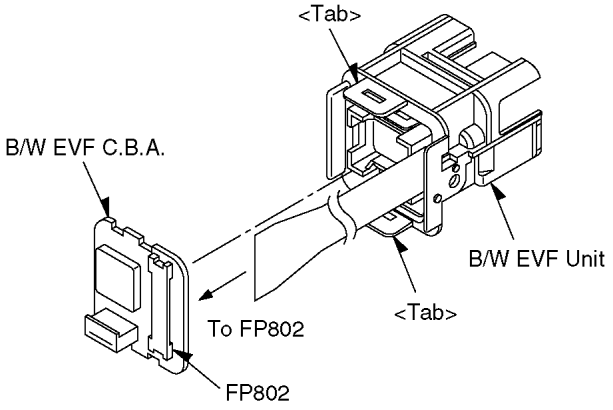


Fig. D23

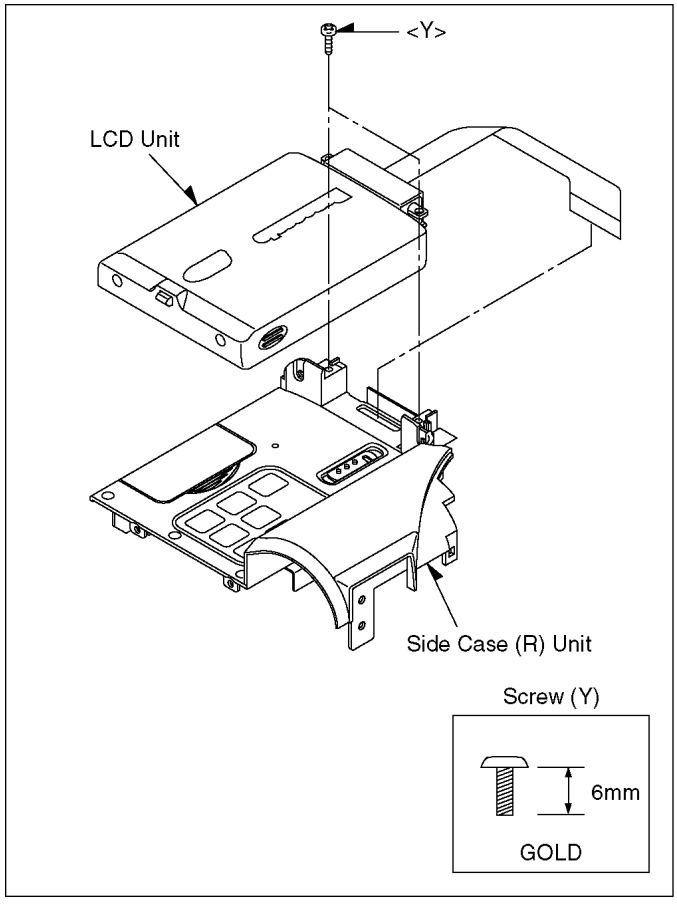


Fig. D24

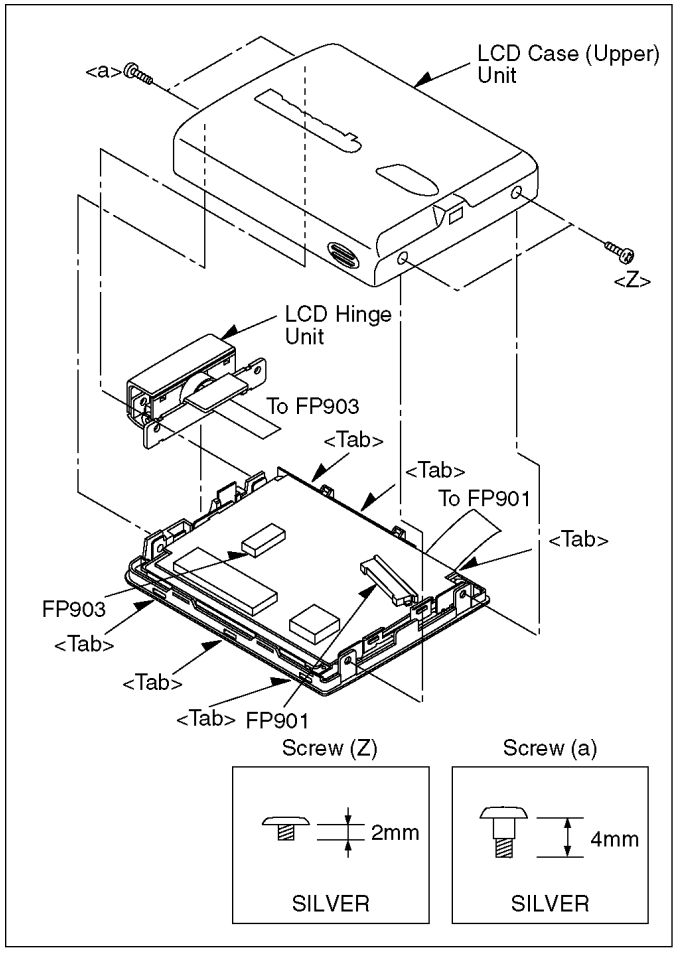


Fig. D25

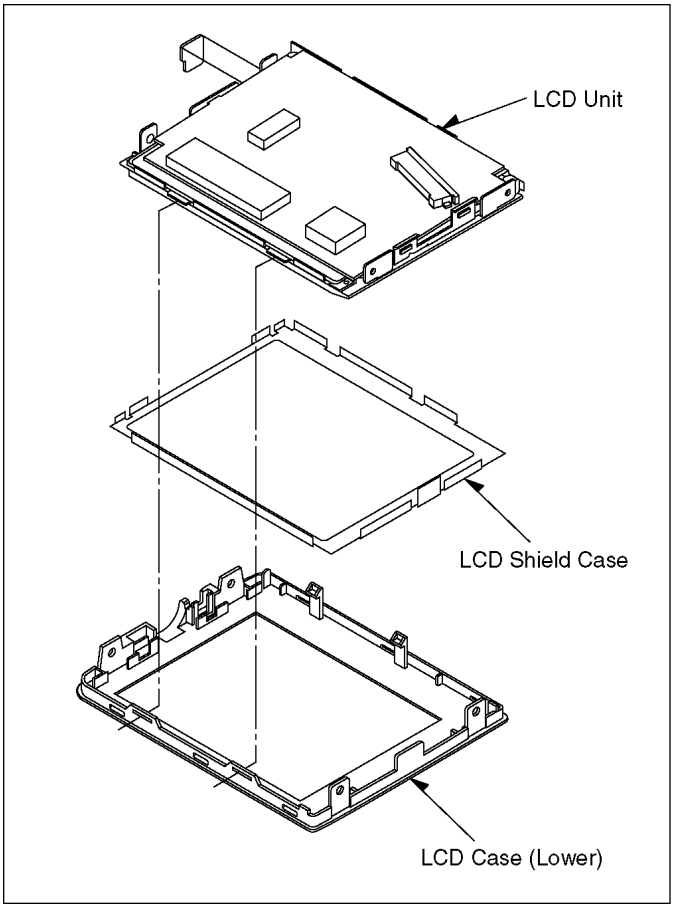


Fig. D26

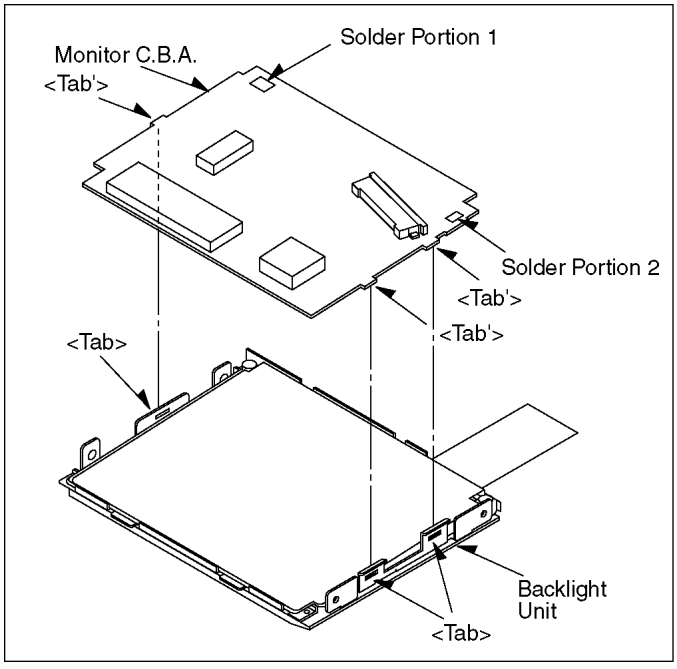


Fig. D27

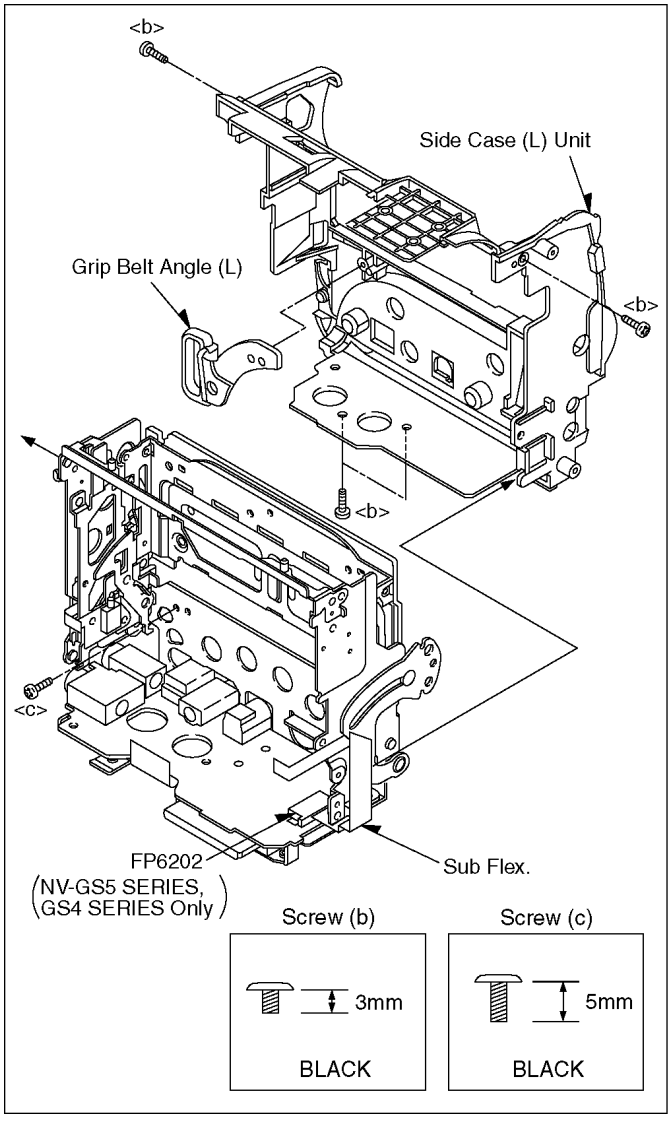


Fig. D28

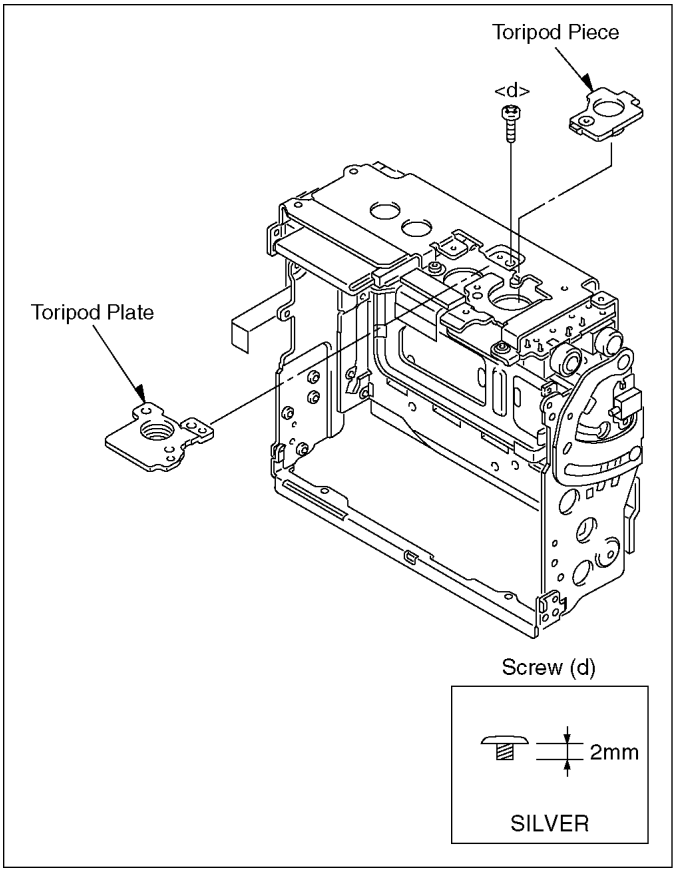


Fig. D29

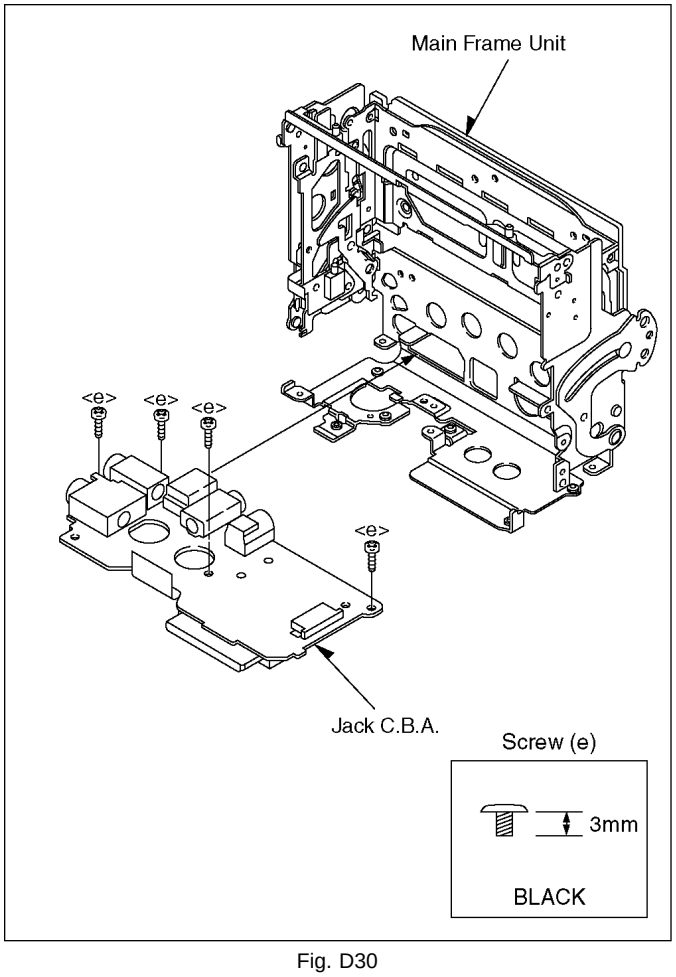


Fig. D30

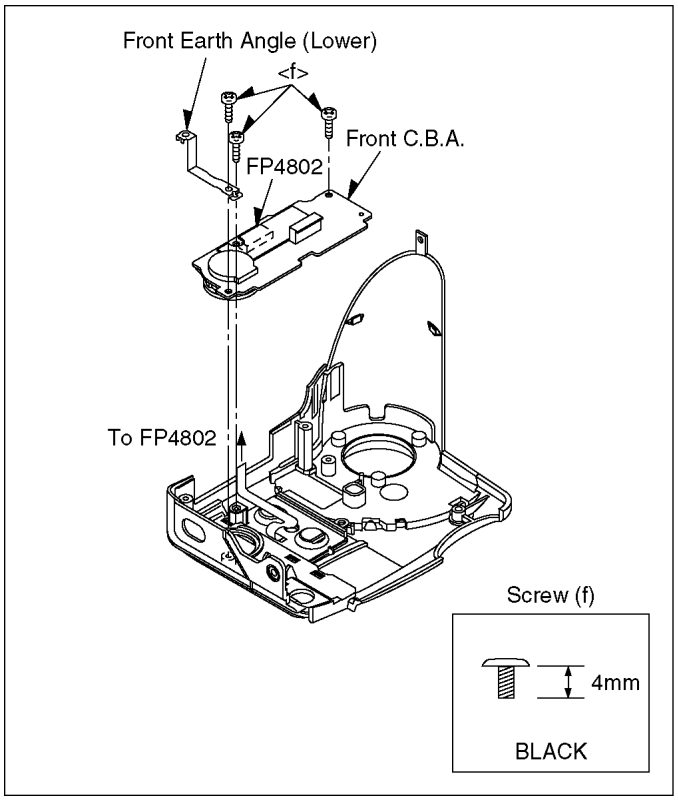


Fig. D31

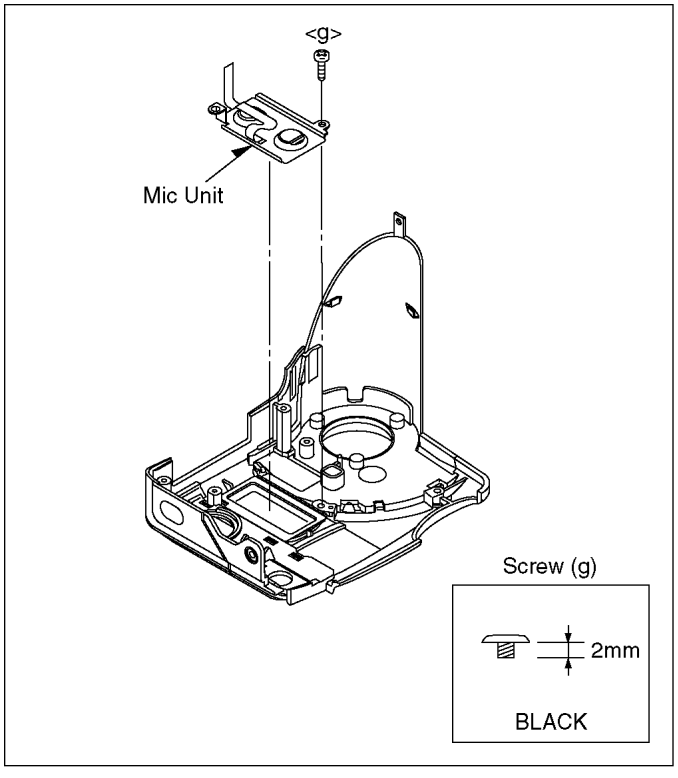


Fig. D32

8.3. DISASSEMBLY PROCEDURES OF CAMERA LENS UNIT

The following flowchart describes order or steps for removing the Camera lens unit and certain printed circuit boards in order to make access to the item needing service.
To reassemble the unit follow the steps in reverse order.

1. CCD Unit	Ref.No.301
2. CCD Cushion & Crystal Filter	Ref.No.315/316
3. Lens Flex. Unit & Zoom Motor Unit	Ref.No.312/313
4. Master Flange Unit	Ref.No.311
5. 4th Moving Frame Unit	Ref.No.308
6. 3rd Moving Frame Unit	Ref.No.307
7. Iris Unit	Ref.No.306
8. 2nd Moving Frame Unit & Guide Pole	Ref.No.305/309/310

Note 1:
Each Ref-numbers are equivalent to number of Fig.L2 and Parts List.

Fig. L1

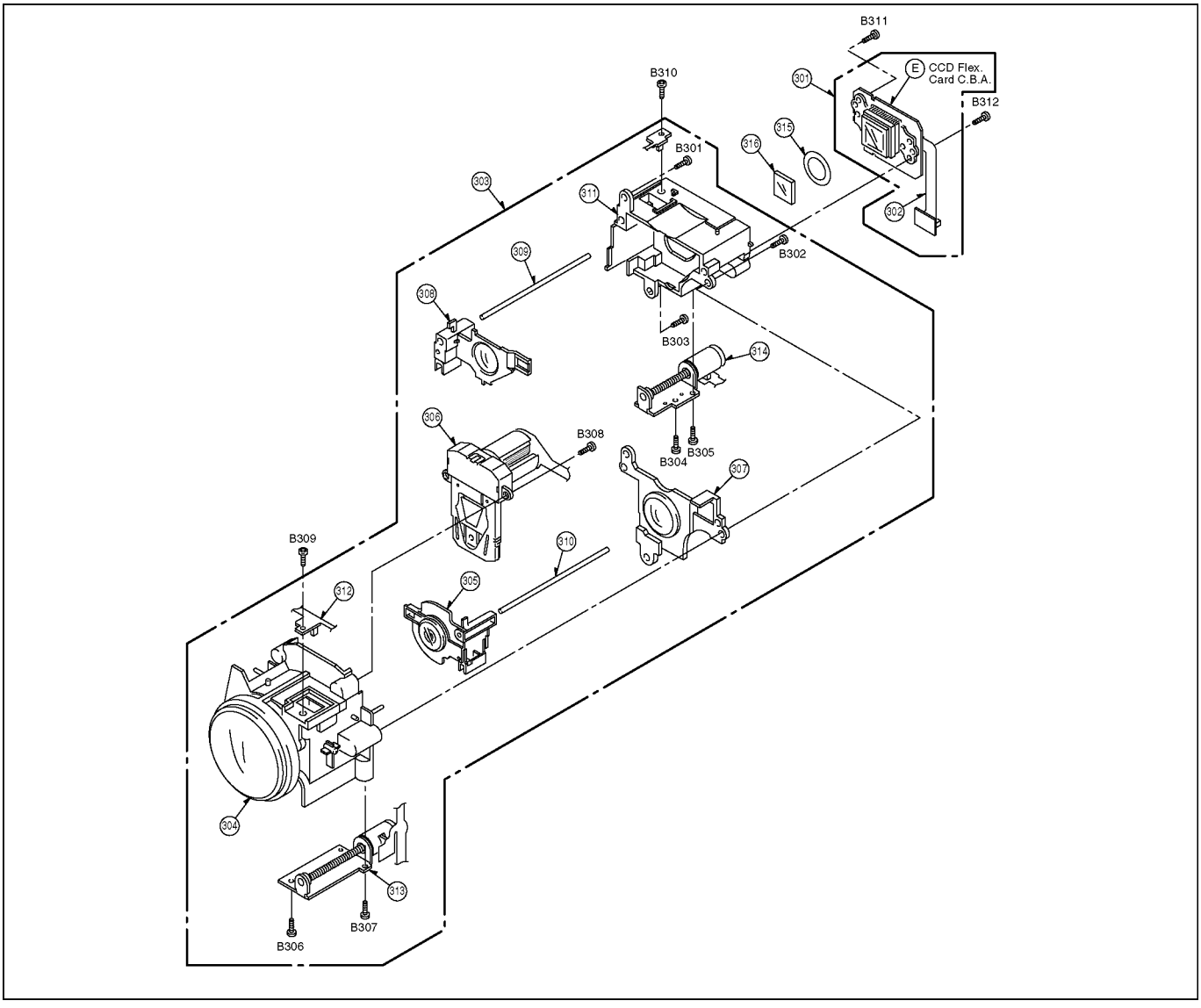


Fig. L2

9 ABBREVIATIONS

INITIAL/LOGO		ABBREVIATIONS
A	A GND	Analogue GND
	A HASW	Audio Head Amp Switching Pulse
	A HSW	Audio Switching Pulse
	A MUTE	Audio Mute
	A ORP	Audio Overlap Pulse
	A. TR	Auto Tracking
	A0-8, 0-17	Memory Address
	A3V2	AD Converter Reference Voltage
	AB0-4	Address Bus
	AB0-4, AB12-15	Address Bus Line 0-4, 12-15
	ABSF	Focus Encoder Input
	ACI	Analogue Channel Cording IC
	AD	AD Converter
	AD	Auto Date, Analogue Digital Converter
	AD CLK	AD Clock
	AD REC	Audio Delayed REC
	AD0-6	Address
	AD0-6, ADR0-6	Address Data Line
	ADCLK	Analogue Digital Converter Clock
	ADCNT	Analogue Digital Control
	ADCS	Analogue Digital Chip Select
	A-DET	Audio Detect
	ADREC	Audio Delaied Rec
	ADUB	Audio Dubbing
	AE	Auto Expose
	AECNT	Auto Expose Control
	AEE(H)	Audio E-E (H)
	AEH	Audio Erase Head
	AEIRQ	Auto Expose Interrupt Request
	AF/MF	Auto Focus/Manual Focus
	AF DIS CS	AF DIS Chip Select
	A-FADE(L)	Audio Fade (L)
	AF-AMP	AF HALL Bias
	AFCS	Auto Focus Chip Select
	AFRP	Audio PLL Voltage Control
	AF-VN	Zoom Encoder V-Ref (–)
	AF-VP	Zoom Encoder VREF (+)
	AGC	Automatic Gain Control
	AGCCNT	Automatic Gain Control Control
	AGND	Analogue Ground/Audio Ground
	AGS	Anti Ground Shooting
	AH(P) / (R)	Audio Head (Play) / (Record)
	AHASW	Audio Head Amp Switch Pulse
	AHSW	Audio Head Switch Pulse
	AI, AO	Buffer Input, Output
	AIBCK	Bit Clock (to A/D Converter)
	AIDAT	Serial Data (to A/D Converter)
	AILRCK	L/R Clock (to A/D Converter)
	AIMCK	Master Clock (to A/D Converter)
	ALC CNT	Auto Level Control Control
	ALC MAIN	Auto Level Control Drive
	ALE	Address Latch Enable
	A-LOCK	Full Auto Switch
	A-MUT(H)	Audio Mute (H)
	ANLPTH	Analogue Loop Through High
	AORP	Audio Overlap Pulse
	APCNT	Aperture Control
	APS	Auto Power Save
	ART VH	Artifical Vertical Sync
	AT CNT	Automatic Tracking Gain Adjust
	ATF	Automatic Track Finding
	ATFCLK	41.85MHz Clock
	ATFG	Auto Track Gain
	ATL	Auto Lock Select
	ATN	Absolute Track Number
	ATR OFF(H)	Auto Tracking Off (H)
	ATV	Advanced TV
	AUDIO(N)	Audio (Normal)
	AUX	Auxiliary
	AVDD	Analogue VDD
	AVSS	Analogue Ground
	AWTB	Auto White Balance B-Y
	AWTR	Auto White Balance R-Y
B	BACK	Back-up
	BACK UP	Microcomputer Back-up
	BACK VDD	Back-up Power
	BATT	Battery
	BATT ALARM	Battery Alarm
	BATT REF	Reference Voltage for Battery
	BCB	B Carrier Balance
	BCBM(B-Y)	B-Y Carrier Balance
	BCBM(R-Y)	R-Y Carrier Balance
	BD0-7	REC/Play In/Out Buss
	BDCK	Standard Bus Data Clock (9MHz)
	BDEN	Standard Bus Data Enable
	BEND	Data Block End Request
	BF	Burst Flag Pulse
	BFA	Burst Flag Pulse for Encorder
	BFO/BFI	Burst Flug Input/Output
	BI, BO	Buffer Input, Output
	BL	Back Light
	BL ON	Back Light ON (L)
	BL4V	Back Light 4V
	BLC 0, 1	Back Light Y Control Out, In
	BLDI/O	Back Light Drive Input/Output
	BLK	Blanking Pulse
	BLKA	Blanking for Encorder
	BLKA	Blanking Pulse for Encorder
	BLKI/O	Blanking Pulse In/Out

	INITIAL/LOGO	ABBREVIATIONS
	BLKZ	Blanking Pulse for Zoom Encorder
	BM	Balance Modulator
	BQUIET	Bus Out Control Signal
	BUF IN/OUT	Buffer In/Out
	B-Y KB	B-Y Carrier Balance
	B-YO	B-Y Signal Out
C	C A In/Out	Pre-Aperture In/Out
	CAPSTP	Capstan Stop Flag
	C CNT	Colour Control
	C SYNC	Composite Sync Signal
	C/N	Carrier/Noise
	C0-7, C00-07	Chrominance Signal 0-7
	CAGAIN	Aperture Gain Control
	CAM	Camera
	CAM CLK	Camera Clock
	CAM RST	Camera Reset
	CAM SIOC	Camera Serial In/Out Contol
	CAM T	Camera Test
	CAM TL	Capstan Trque Limit
	CAP EC	Capstan Trque Control
	CAP P(H)	Capstan Power On (H)
	CAP R/F/S	Capstan Reverse (H)/Stop (M)/Forward (L)
	CAP SW	Capstan Power Control Switch
	CAPSTP H	Capstan Stop Flag (Stop High)
	CAPVM	Capstan Motor Current
	CAPVS	Capstan Motor Power Control Switch
	CAS	Compresion, Audio Process, Shuffling/Deshuffling
	CAS	Memory Address Strobe (Active Low)
	CASDOWN, DWN	Cassette Down (L)
	CB, CR	Chroma B, Chroma R
	CBLK	Composite Blanking Pulse
	CC	Channel Cording
	CCA	Curent Drive Control
	CCA	Current Control Amp
	CCD	Charge Coupled Devise
	CCW	Counterclockwise
	CD SP0-7	Digital Chroma
	CDS	Correlate Double Sampling Signal
	CDS1, 2	Sampling Pulse for CCD Output Signal
	CE	Chip Enable
	CE	Control Pulse Erase
	CEC	Capstan Error Code
	C-ERA(H)	Control Erase (H)
	CFEM	Chrominance Memory Signal
	CFM	Chrominance Field Memory
	CFM1-4	Chroma Field Memory Signal
	CG CLK	Character Generator Clock
	CG CLK DATA	Clock Generator Data
	CG DATA	Character Generator Data
	CGC	Chrominance Gain Control
	CGCS	Character Generator Chip Select
	CGO	Character Generator Serial Data
	CH	Charge

	INITIAL/LOGO	ABBREVIATIONS
	CH1	Channel 1 (Odd Field)
	CHR	Character
	CHR BACK	Character Back-up
	CHR MIX	Character Mix
	CI, CO	Buffer In/Out
	CI,CO	Buffer Input & Output
	CIF	Control Signal Forward Input
	CIF, CIR	Positive Control Pulse, Negative Control Pulse
	CIR	Control Signal Reverse Input
	CK	Clock
	CL/CLK	Clock
	CLASS	Classeffication Signal for Compress (DCT/VLC)
	CLASS 0.1	Class Control Signal Durring DCT/VLC
	CLK135	13.5MHz System Clock
	CLK18	18MHz System Clock
	CLK2	Clock 2 (824XFH: 12.875MHz)
	CLK246	24.576MHz Clock
	CLK27	27MHz System Clock
	CLK450	450KHz Clock
	CLKDCLK	Digital Clock
	CLK-PH	Clock Phase Control
	CLK-REF	Reference Clock
	CLP-RST-H	Clamp Reset High Signal
	CLX	TFT X-axis Transmission Clock
	CLX, CLX1-4	Shift Clock for X Direction (LCD Panel)
	CLY	Shift Clock for Y Direction (LCD Panel)
	CLY	TFT Y-axis Transmission Clock
	CLY FG	Cylinder FG Signal
	CMEMO0-3	Chroma Memory Output Signal 0-3
	CMIX	Character Mix
	CMO	Chrominance Memory Output
	COMPC	Position Detection Pulse
	COM RDY	Serial Enable Signal
	CMODE	Camera Mode
	CNCLK	Clock
	CNR	Chrominance Noise Reduction
	CNT, CONT	Control
	CO	Control Out
	CO0-7	Chrominance Output 0 to 7 (Digital)
	COM	Common
	COM RDY	Serial Transmission Enable
	COMB	Comb Filter
	COS EQ	Cosin Equalizer
	CP	Clamp Pulse
	CP ON(H)	Camera Power On(H)
	CP2, 20	Clamp Pulse
	CP2A, CP2O	Encoder Clamp Pulse
	CPN	Component Signal
	CPOB	Clamp Pulse for Optical Blanking
	CPS	Composite Signal
	CPV	Gate Scan Clock
	CR OUT	Pre Apature Out
	CR POW SW	Camera Remote Power On Switch
	CRA	Aperture Gain Control

INITIAL/LOGO		ABBREVIATIONS
	CRA	Pre Apature Gain Control
	CRST	Camera Reset
	CS	Chip Select
	CS 0-7	Chrominance Signal Out 0-7
	CSEL	Clock Phase Select
	CSI 0-7	Chrominance Signal In 0-7
	CTSW	Crosstalk Switch
	CURR	Current
	CW	Clockwise
	CYL EC	Cylinder Motor Trque Control
	CYL PG	Cylinder Motor PG
	CYL VM	Cylinder Motor Current or Power
D	D CLK	Digital Clock
	D MODE	Digital Mode Switch Signal
	D01-03	Zoom 01-03
	DA UV SEL	D/A Convertor U/V Select
	DAC	Digital Analogue Converter
	DAG	Digital Analogue Ground
	DB0-7	Data 0-7
	DB0-7	Microprocessor Data
	DCC	DC Clamp Control
	DCCNT	DC Control
	DCI	Digital Channel Cording IC
	DCLR	Digital Clear
	DCP	Digital Clamp Pulse
	DCS-CLK, DA	CAS & DV I/F Serial Clock
	DC-STP1	DCS Serial Start
	DC-STP2	DCS Serial Stop
	DCT	Discrete Cosine Transform (Compression)
	DCX7	Serial Data
	DEDP 0-3	Playback Data
	DEDR 0-3	Rec Data
	DEMO	Demodulation
	DEMP	A/D Convertor Empahsis Control
	DEMP	De-Emphasis
	DFD 0-7	Encode Data In/Out Between Shaffling Memory
	DFD0-7	Encode Input/Output Signal for Shuffling Memory
	DIBDCK	Bit Clock
	DICLK	Digital Clock
	DIDAT	Serial Data
	DIDAT	Serial Data Durring Digital Audio In
	DIF	Digital Interface
	DILRCK	L/R Clock
	DILRCK	Serial Clock Durring Digital Audio In
	DIMCK	Master Clock
	DIMCK	Mater Clock Durring Digital Audio In
	DIO 1-8	Data In/Out
	DIOS	Data In/Out Select Control Signal
	DIOS	Select Signal for Digital In/Out
	DIS	Digital Image Stabilizer
	DIS R/B	Digital Image Stabilizer Read (H)/Busy (L)
	DIS R/B	DIS IC Rady/Busy
	DIS/KAND	Digital Image Stabilizer/Sensitivity
	DISCS	Dis Chip Select
	DISP	Display
	DL	Delay Line
	DOBCK	Audio A/D Convertor Bit Clock
	DOCTL	Data Output Control Signal
	DODAT	Serial Data (to D/A Converter)
	DOLRCK	Audio A/D Converter LR Clock
	DOLRCK	L/R Clock (to D/A Converter)
	DOMCK	Audio A/D Converter Master Clock
	DOMCK	Master Clock (to D/A Converter)
	DQ 1-16	Memory Data
	DRAM CAS	D-RAM Colum Address Strobe
	DRAM OE	D-RAM Out Enable
	DRAM RAS	D-RAM Read Address Strobe
	DREC	AV Delayed REC Start Pulse
	DRK	Dark (LPF Switch for Auto Focus)
	DS1, 2	Double Sampling Pulse
	DSF 0-7	Data In/Out for Shaffling Memory
	DSF 0-7	Input/Output Data to Shuffling Memory (18MHz)
	DSP	Digital Signal Processor
	DSP R/B	DSP IC Rady/Busy
	DSP-48K-H	DSP IC Clock Select
	DSTB	Data Stobe Signal
	DSV	Digital Sum Variation
	DV	Digital Video
	DVB	Digital Video Broadcast
	DVC	Digital Video Cassette
	DVDD	Digital VDD
	DVIO	Digital Video Input Output
	DVSS	Digital Ground
	DX	Shift Data for X Direction (for LCD)
	DY	Shift Data for Y Direction (for LCD)
	DY	TFT Y-axis Shift Data
	DZ	Digital Zoom
E	E Snap	Electric Snap Shot
	E ZM	Electric Zoom
	E2 CS or E2P CS	EEPROM Chip Select
	E2 R/B	EEPROM Rady/Busy
	E2P	EEPROM
	EARP	Earphone
	EC	Torque Control
	ECC	Error Correction Cording
	ECM	Electric Condencer Mic
	ECR	Reference Voltage for Capstan Torque
	EDA	Error Correction, DCI, ATF Servo
	EE CS	EEPROM Chip Select
	EE R/B	EEPROM Read (H)/Busy (L)
	EEPROM	Electric Erasable Programable Read Only Memory
	EIS	Electric Image Stabilizer (DIS)
	EMP	A/D Convertor Emphasis Control
	ENAB	Enable
	ENV	Enverope
	EOB	End of Block

INITIAL/LOGO		ABBREVIATIONS
	EQ	Equalizer
	EVF	Electric View Finder
	EXT DC	External DC (AC Adaptor)
	EXT DC(H)	AC Adaptor DC (H)
	EXT NOREG	AC Adaptor 6V
	EXT S DATA	Serial Data for Edit
	EXT SCK	Serial Clock for Edit
	EZOOM	Electric Zoom
F		
	F ENC	Lens F-Value
	FACT MODE	Factry Mode (not used in the service)
	FB	Feed Back
	FC	Saw Tooth Signal In
	FCK	Clock
	FCO	Saw Tooth Signal Generator
	FENC	Focus Encoder
	FEND	Frame End Pulse
	FH2B	FH/2 (15.625KHz / 2=7.8125KHz)
	FIX OSD	Auto Tracking Off (H)
	FLICK	Flicker Output
	FM	Field Memory
	FM0-7	Field Memory 0-7
	FMCO0-3	Field Memory Chrominance Out 0-4
	FMDIR	Focus Motor Direction
	FMOEM	Field Memory Enable
	FMOEO	Field Memory Enable
	FMT1-4	Focus Motor Terminal 1-4
	FMY00-07	Field Memory Luminance Out 0-7
	FMYI0-07	Field Memory Luminance In 0-7
	FNO	F Value
	FPS	Frame Refference Signal
	FR	Capstan Reverse High
	FRP	Frame Refference Pulse
	FRPSO	Frame Start Pulse
G	G1, G2, G3	Gap 1, 2 and 3
	GCA	Gain Control AMP
	GCNT	Gain Control
	G-CNT	AGC Adjustment
	GCTRL	Gain Control
	GENE	Generator
	GF	FG AMP Terminal
	GSW	Ground for Switching Power
H	H/M/N	Hi-Fi / Mix / Normal
	H/N	Hi-Fi / Normal
	H1, 2	H. CCD Drive Pulse
	HAP	Horizontal Aperture
	HASW	Head AMP Switching Pulse
	HB	Hall Bias
	HBR SET	High Brightness Set
	HBRST	High Brightness Set
	HCLR	High Clear
	HCP	Shift Clock for Horizontal Drive
	HD	Horizontal Drive Pulse
	HDTV	High Definition TV
	HEX	Hexadecimal
	HG	Hall Gain
	HID	Head Switching Pulse
	HLT	High Bright Signal
	HALL IN(+), (–)	Input Signal from Hall IC
	HP	Headphone
	HPF	High Pass Filter
	HSE	Modulated Data Output
	HSP	Timing Pulse for Shaffling Memory
	HSS	Horizontal Sync Signal
	HSW	Head Switching Pulse
	HS-WT	High Speed Zoom
	HSZ	High Speed Zoom
I	I/F	Interface
	I-2 C	Inter Integrated Circuit
	ID(H)	Wide Television (H)
	IMP	Inter Microprocessor Protocol
	INF	CCD Input Signal 1
	INF	Input Frame Signal
	INS	CCD Input SIgnal 2
	INTER	Interval Recording
	INV	Inverter
	IOU	R-Y Analogue Signal Output
	IOV	B-Y Analogue Signal Output
	IOY	Y Analogue Signal Output
	IR	Infrared Rays
	IRDET	Imfrared Ray Detection
	IREF	Current Adjustment Terminal
	IRIS/SH	Iris / Shutter Control
	IRQ	Interrupt Request
	ITI	Insert & Track Information
J	JPEG	Joint Photographic Image Cording Experts Group
K	KANDO	Digital Gain Up
	KB	Carrier Balance
	KEY IN	Key Scan
	KND	Digital Gain Up
	KNEE	Luminance Compensate
L	LCD	Liquid Crystal Display
	LCD P(L)	LCD Power On (L)
	LD	Load Pulse
	LDD	Liquid Direct Drive
	LEDCNT	LED Control
	LI-BATT	Lithium Battery
	LOAD	Loading
	LOAD F, R	Loading Direction (F: Forward / R: Reverse)
	LPF	Low Pass Filter
	LRMONO	Monoral Audio (L + R)
	LSB	Least Significant Bit

INITIAL/LOGO		ABBREVIATIONS
	LVL	LPF Switch for Auto Focus
M	M1-3	Motor Coil Terminal 1 to 3
	MA0-5	Microprocessor Address Data 0-5
	Mbps	Megahertz Bit Per Second
	MD	Modulation
	MD0-7	Microprocessor Data 0-7
	MDT0-7	Microprocessor Data 0-7
	ME (TAPE)	Metal Evaporated (Tape)
	MENB	Focus Motor Enable
	MFF	Manual Focus Far
	MFN	Manual Focus Near
	MHSYNC	Monitor Horizontal Sync Signal
	MIC	Memory In Cassette
	MIG	Meta In Gap
	MIX N.R.D.	Non Rec Data Mix
	MOD	Modulation
	MOUT	Mic Out
	MP (TAPE)	Metal Particle (Tape)
	MPEG	Moving Picture Image Cording Experts Group
	MPEG2	Moving Picture Image Cording Experts Group Phase 2
	MRST	Focus Motor Reset
	MSB	Most Signal Bit
	MVSYNC	Monitor Vertical Sync Signal
N	N/F	Near/Far Focus
	N/P	NTSC/PAL
	NB1-3	Base for NPN Transistor
	NC	No Connection
	NC1-3	Corrector of NPN Transistor
	NCLR	Power On Reset
	NCP1	Clamp Pulse
	NCP2+VDH	Clamp Pulse + Horizontal Drive Pulse
	NCP2+VDM	Clamp Pulse + Gate Pulse
	NDE	Non Liner De-Emphasis
	NE	Emitor of NPN Transistor
	NLE	Non Liner Emphasis
	NR	Noise Reduction
	NRD	Non Rec Data
	NRD BLK	Non Rec Data Blanking
	NRD CLK	No Rec Data Clock
	NRE	Read Enable Input (Low Active)
	NWE	Write Enable (Low Active)
O	OB	Optical Black
	OBCNT	Optical Black Control
	OBREF	Reference Voltage for Optical Black Control
	OE	Output Enable
	OFH	Horizontal Counted Down Clock Signal (Reference)
	OFS	Offset
	OP	Operation AMP Output
	OSD	ON Screen Display
	OVL	Overlap Pulse
	OZ	Optical Zoom

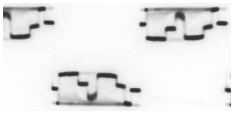
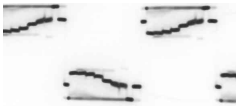
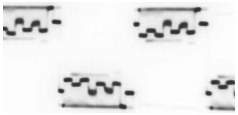
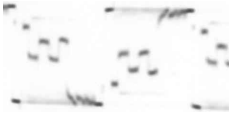
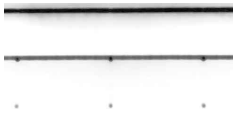
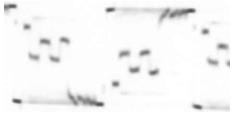
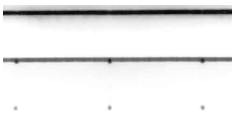
INITIAL/LOGO		ABBREVIATIONS
P	P SW	Power Switch
	PB1-3	PNP Base 1-3
	PBCTL	Play Back Control
	PBCTL	Pre-Branking Control
	PBH	Head Amp Switch
	PBLK	Pre-Blanking (Pulse)
	PC1-3	Corrector of PNP Transistor
	PCBM	Carrier Balance
	PCH	Phase Compensator (Hall AMP)
	PCI	Phase Compensator (Current)
	PCO	Phase Compensator Out
	PCS	Switching Power Control
	PCV	Phase Compensator (Voltage)
	PE	Emitter of PNP Transistor
	PED	Pedestal
	PEDECNT	Pedestal Control
	PENO	Alarm (L)
	PFP	Pilot Frame Position
	PGA, B	Power Ground A, B
	PGC	Pulse Generator Comparator
	PGI	Pulse Generator Input
	PGMM	Pulse Generator Monostable Multivibrator
	PGO	Output of Pulse Generator AMP
	PMODE	Select Signal for Normal / Wide Screen
	PON	Power On
	POR	Power On Reset
	POSCOM	Common Position
	PREAMP	Pre-AMP
	PREBLK	Pre-Blanking
	PT	Protect for V Voltage
	PWM	Pulse Width Modulation
	PWMB	Pulse Width Modulation Pulse
Q	Q2H	Source Output Select
R	R CTL P	Recorded Control Pulse (+)
	R CTL R	Recorded Control Pulse (–)
	R/B	Read/Busy
	R/L	Direction Control for Data Transmition
	RA	Recording AMP
	RA1	Rec AMP 1
	RAC AC	Rec Audio Current
	RAD	Read Address Data
	RAE	Read Address Enable
	RB	Read Busy
	R-B	R Bias
	RCB	R Carrier Balance
	RE	Read Enable
	RE(F), (S)	Rotary Erase Head Transformer
	REB	R Bias
	REC CC	Rec Current Control
	REC CCNT	Rec Current Control
	RECCTRL	Recording Control Pulse
	RECI	Rec Amp Switch

	INITIAL/LOGO	ABBREVIATIONS
	RENCF	Lens Control (Forward)
	RENCR	Lens Control (Reverse)
	RERASE	Rotary Erase Head
	RGBIV1-2	1V Inverted Signal 1-2
	RGO R/G OFF	Offset Voltage for AWT R
	RSF	Capstan Direction (Reverse / Stop / Forward)
	RST	Reset
	RSTB	R Strobe
	RSTPWD	Reset Power Down Input
	RSTR	Reset Read
	RSTW	Reset Write
	RT	Saw Tooth Terminal
	RVCO	Resister for Oscillation
	RW	Read Write
	RWAE	Read Write Enable
S	S PHOT	Supply Photo Transistor
	S/H	Sampling Hold
	S/S	Start/Stop
	SBD	Serial Data
	SBI	Serial Data Input
	SBO	Serial Data Output
	SBT	Serial Clock
	SCAN0-5	Key Scan 0-5
	SCK	Serial Clock
	SCR	Search
	SCR, S.C.R.	Still Cue Review
	SEG.	Segment
	SET	White Balance Set
	SH/IRIS	Shutter/Iris Control
	SHIFT	Capasitor for Phase Shift
	SI	Serial Data Input
	SIC	Shift In Clock Input
	SIOC	Serial In/Out Control
	SMCE	Shaffling Memory Chip Enable
	SMRS	Shaffling Memory Read Strobe
	SMWE	Shaffling Memory Write Enable
	SMWS	Shaffling Memory Read Strobe
	SNAP	Snap Shot
	SNS LED	Sensor LED
	SO	Serial Data Output
	SPA	ATF Smapling Pulse
	SPEN	8 Bit Shift Register Enable
	SPK	Speaker
	SPO	Reset for Switcing Power
	SPST	8 Bit Shift Register Strobe
	SREELP	Supply Reel Pulse
	SRT	Start
	SSA	Start Sync block Area
	SSW	Select Signal for Low Pass Filter
	ST5V	Safety Tab 5V
	STAB	Safety Tab Switch
	STB	Stand by Signal
	STB	Strobe

	INITIAL/LOGO	ABBREVIATIONS
	SWB	Switching Pre-Drive Pulse
	SYL EC	Cylinder Torque Control
	SYL FG	Cylinder FG
T	T PHOT	Take-up Photo Transistor
	TBC	Time Base Conntrol
	TFT	Thim Film Transistor
	TH	Thermostat for Battery
	TI	Test Mode Select
	TL	Torque Limit
	TM	Sub Code
	TMD	Sub Code Data
	TRE	Tracking Error Signal
	TREEL(P)	Take-up Reel (Pulse)
	TRFIX	Tracking Fix
	TRIWAVE	Tracking Wave
	TRP	Tracking Position
	TRP	Trap
	TSR	Head Switching Refference
	TST	Time Scale Transfer
U	U/V SEL	R-Y/B-Y Select Signal
	UNLOAD	Un-Loading
	UNRE	Microprocessor Read Enable
	UNWE	Microprocessor Write Enable
	UV	R-Y/B-Y
	UV SEL	R-Y/B-Y Select Signal
V	V1-V4	V. CCD Drive Pulse
	VB	VH Filter Switching
	VCE	Power Terminal
	VCNTL	Video Control
	VCO	Voltage Control Oscillator
	VCP	Shift Clock Output for Vertical Drive
	VCTLD	Video Control
	VCTRL	Voltage Charge Control
	VD	Vertical Drive Pulse
	VDDX	X Drive Power for Colour LCD
	VDDXY	XY Drive Power for Colour LCD
	VDDY	Y Drive Power for Colour LCD
	VDREC	Video Delayed Rec
	Vgg	Voltage for Gate IC
	Vgl	Gate off Voltage
	VID	Video Signal Out
	VIN	Video In
	VITC	Vertical Interval Time Code
	VITERBI	One of Signal Detection Method
	VL	Low Voltage
	VLC	Variable Length Cording
	VLOCKP	Artificial Sync Pulse
	VLP	Artificial Sync Pulse
	VM	Motor Voltage
	VMD	Velocity Mode Data
	VMD1-3	Electric Shutter Mode

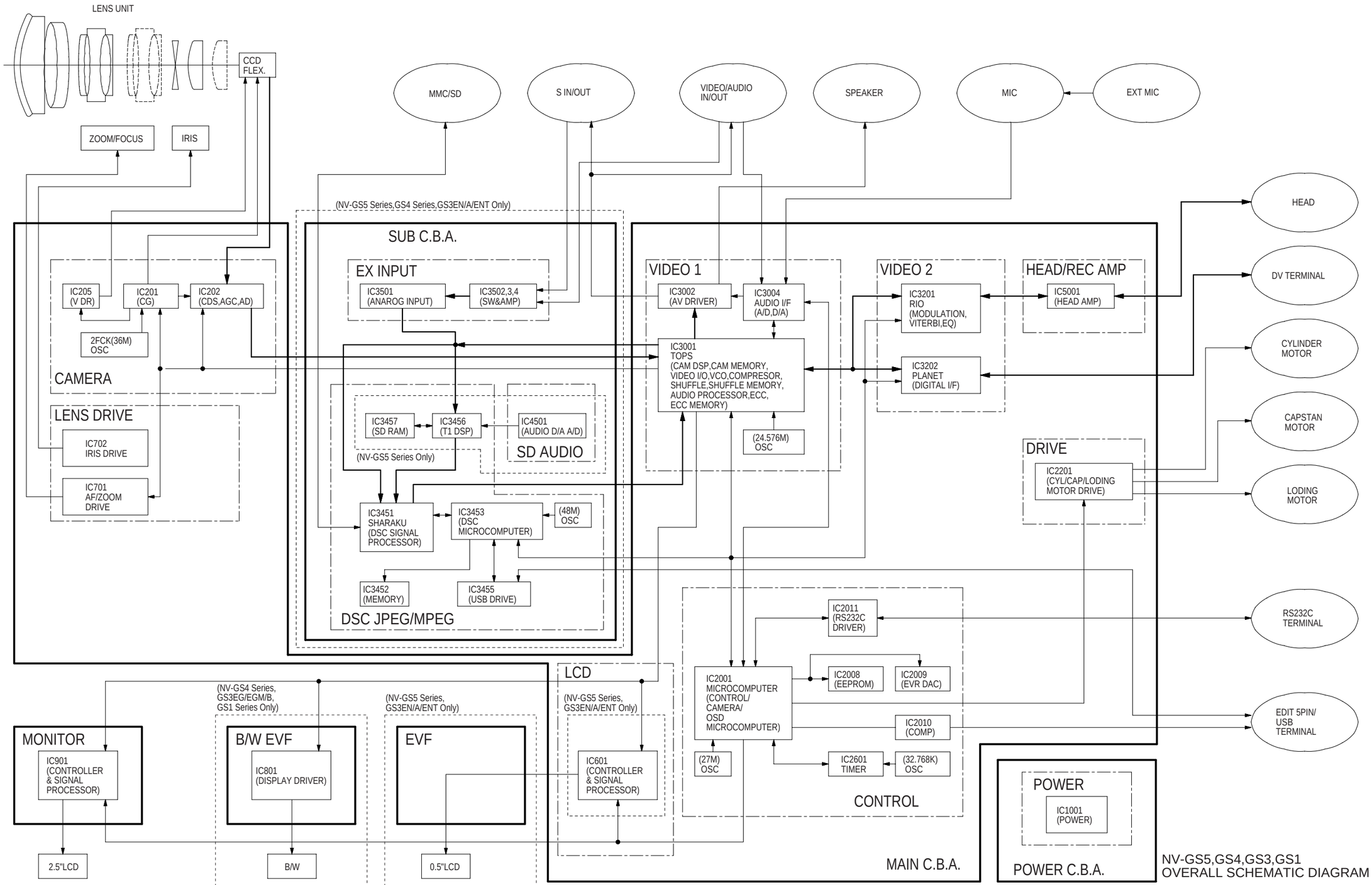
INITIAL/LOGO		ABBREVIATIONS	INITIAL/LOGO		ABBREVIATIONS
	VMODE	NTSC/PAL Select Switch			
	VMVH	VH Filter Switching			
	VORP	Video Overlap			
	VRB	Voltage Refference Bottom			
	VRBS	Voltage Refference Bottom Output			
	VREF1R3V	Refference Voltage 1.3V			
	VREF3R3V	Refference Voltage 3.3V			
	VREFH	Refference Voltage High Side			
	VREFL	Refference Voltage Low Side			
	VRI	Refference Voltage Input			
	VRO	Refference Voltage Output			
	VRT	Voltage Refference Top			
	VRTS	Voltage Refference Top Output			
	VS	Switching Comparator			
	VSS	Vertical Sync Signal			
	VSSX	X Driver Power for Colour LCD			
	VSSXY	X-Y Driver Power for Colour LCD			
W	W/N	Mode Select for Window Mode			
	W/N	Wide / Normal			
	WAD	Write Address Enable			
	WAE	Write Address Enable			
	WAERAE	Write Address Enable			
	WARI	Interrupt			
	WB	White Balance			
	WE	Write Enable			
	WEM	Memory Write Enable			
	WHD	Wide Horizontal Drive Pulse			
	WIDE A	Wide Zoom			
	WSB	B AGC Control			
	WSR	R AGC Control			
	WTV	Wide TV			
X	XP	FG Logic Reset			
Y	Y FM0-7	Y Field Memory 0-7			
	YCE	Cylinder Error Code			
	YGC	Y Gain Control			
	YMO 0-7	Y Field Memory 0-7			
	YNCST	Noize Canceller			
	YNR	Luminance Noise Reduction			
	YSDP 0-7	Digital Y Out 0-7			
Z	Z.ENC	Zoom Encoder			
	Z.MIC	Zoom Mic			
	ZENC	Zoom Encoder Output			
	ZMDIR	Zoom Drive			
	ZMEN	Zoom Enable			
	ZMT	Zoom Motor Tele Side			
	ZMT (+)/(–)	Zoom Motor (+)/(–)			
	ZMTER	Zoom Motor Tele Side			
	ZMW	Zoom Motor Wide Side			
	ZSW	Zoom Switch			

10 WAVEFORM TABLE

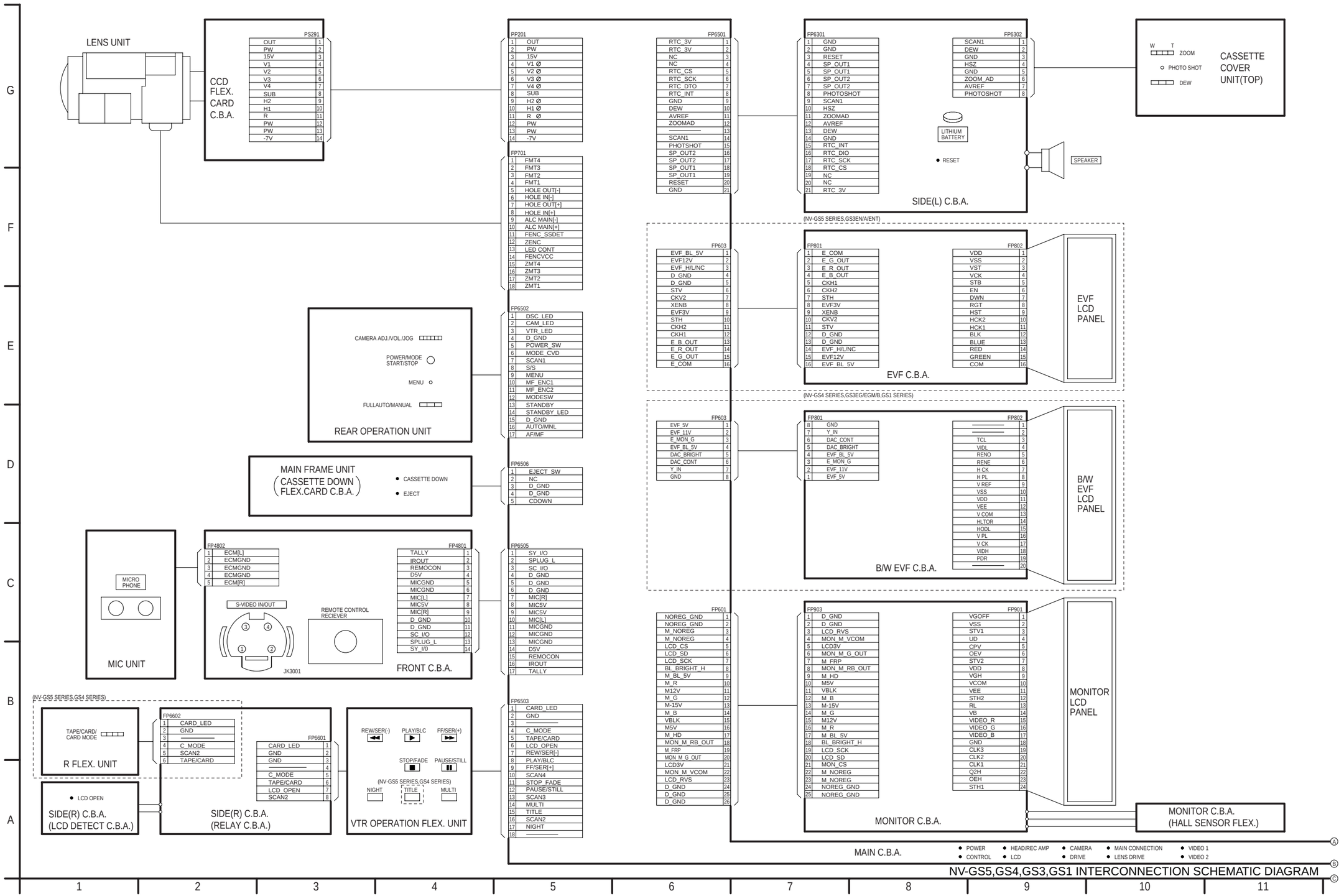
(NV-GS5,GS3EN/A/ENT)  FP801-3 REC/PLAY 8.0Vp-p (20usec.div.)	 FP801-2 REC/PLAY 8.0Vp-p (20usec.div.)	 FP801-4 REC/PLAY 8.0Vp-p (20usec.div.)	 IC901-4 REC/PLAY 4.0Vp-p (20usec.div.)	 IC901-6 REC/PLAY 3.6Vp-p (20usec.div.)
 IC901-8 REC/PLAY 3.6Vp-p (20usec.div.)	 IC901-45 REC/PLAY 2.8Vp-p (5msec.div.)	 IC901-46 REC/PLAY 2.8Vp-p (5msec.div.)		
(NV-GS4,GS3EG/EGM/B,GS1) IC801-5 REC/PLAY 1.0Vp-p (20usec.div.)	 IC901-4 REC/PLAY 4.0Vp-p (20usec.div.)	 IC901-6 REC/PLAY 3.6Vp-p (20usec.div.)	 IC901-8 REC/PLAY 3.6Vp-p (20usec.div.)	 IC901-45 REC/PLAY 2.8Vp-p (5msec.div.)
 IC901-46 REC/PLAY 2.8Vp-p (5msec.div.)				

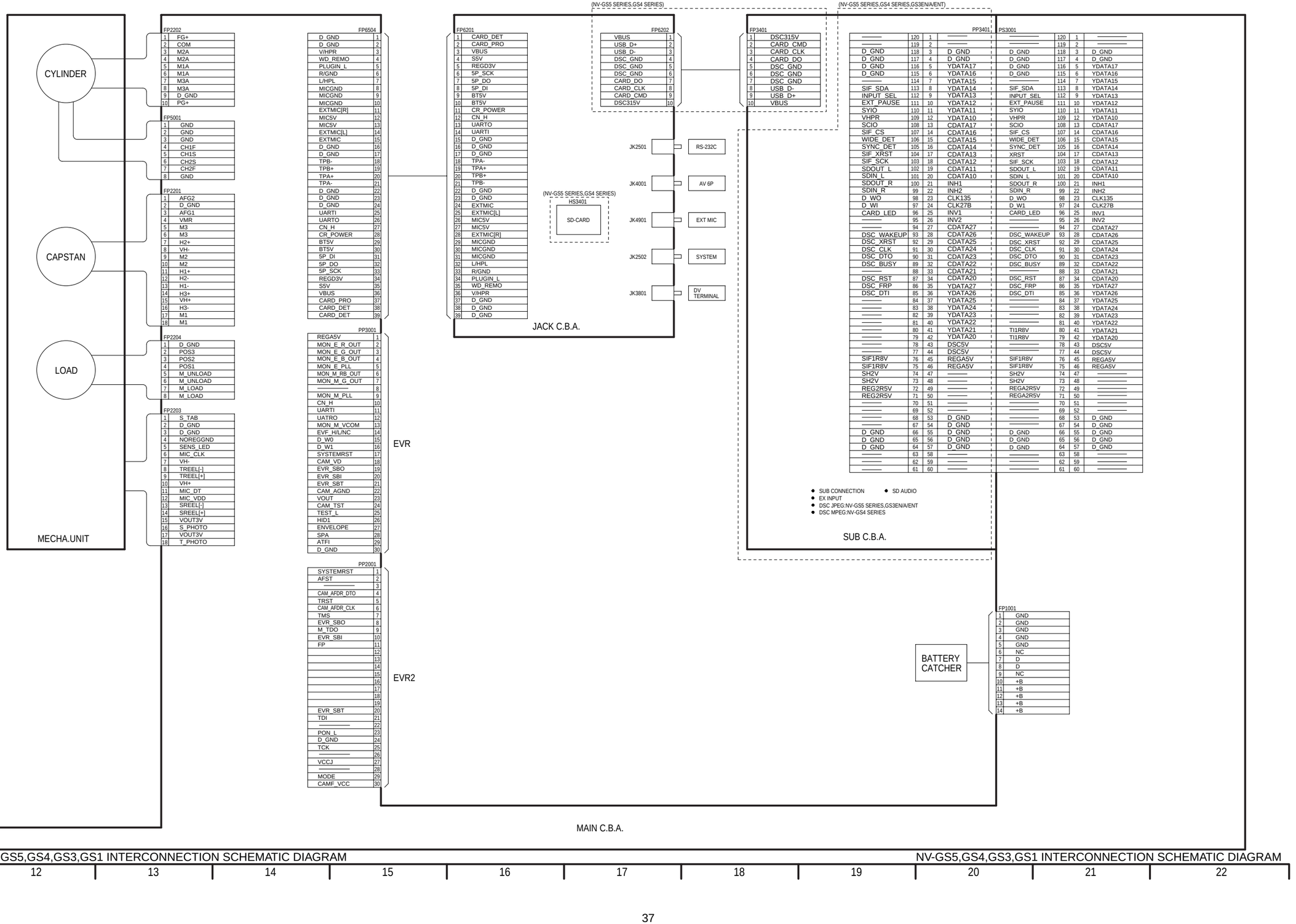
11 SCHEMATIC DIAGRAMS

11.1. OVERALL SCHEMATIC DIAGRAM

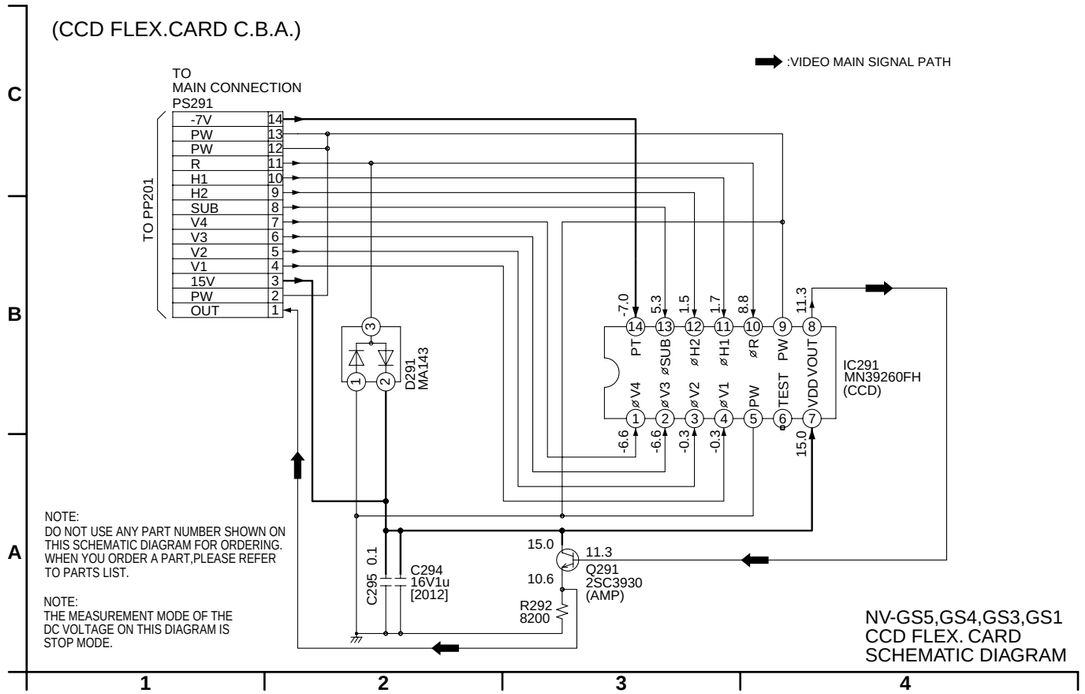


11.2. INTERCONNECTION SCHEMATIC DIAGRAM

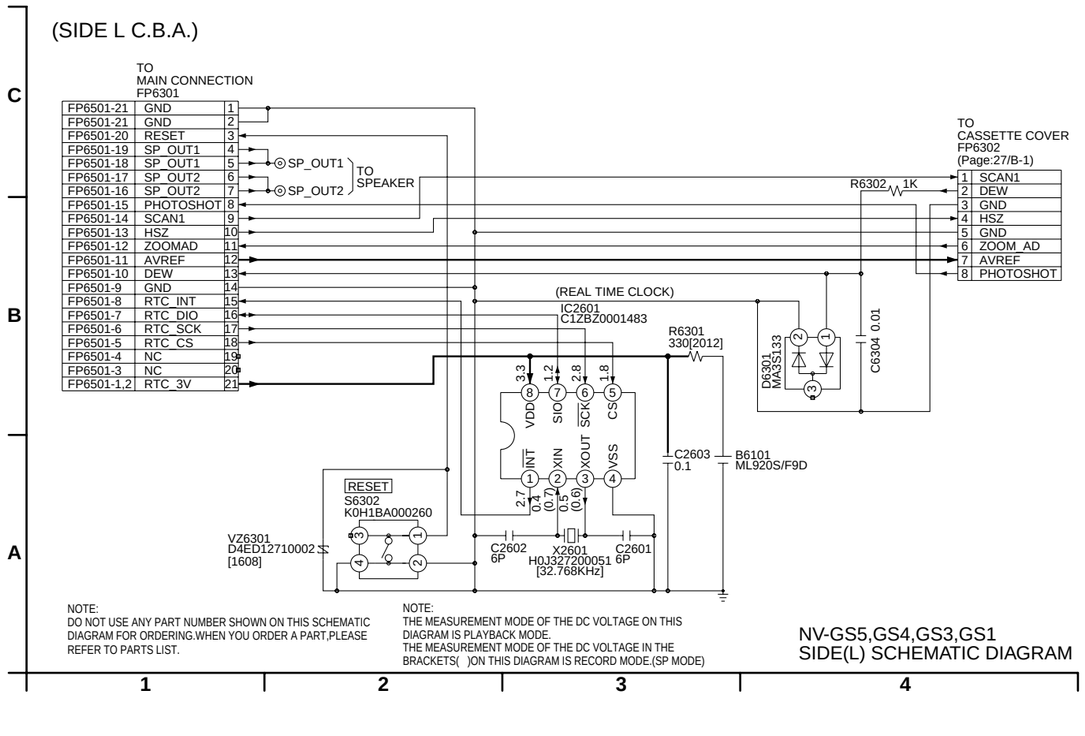



CYLINDER
CAPSTAN
LOAD
MECHA.UNIT
FP2202
1 FG+
2 COM
3 M2A
4 M2A
5 M1A
6 M1A
7 M3A
8 M3A
9 D_GND
10 PG+
FP5001
1 GND
2 GND
3 GND
4 CH1F
5 CH1S
6 CH2S
7 CH2F
8 GND
FP2201
1 AFG2
2 D_GND
3 AFG1
4 VMR
5 M3
6 M3
7 H2+
8 VH-
9 M2
10 M2
11 H1+
12 H2-
13 H1-
14 H3+
15 VH+
16 H3-
17 M1
18 M1
FP2204
1 D_GND
2 POS3
3 POS2
4 POS1
5 M_UNLOAD
6 M_UNLOAD
7 M_LOAD
8 M_LOAD
FP2203
1 S_TAB
2 D_GND
3 D_GND
4 NOREGGND
5 SENS_LED
6 MIC_CLK
7 VH-
8 TREEL[-]
9 TREEL[+]
10 VH+
11 MIC_DT
12 MIC_VDD
13 SREEL[-]
14 SREEL[+]
15 VOUT3V
16 S_PHOTO
17 VOUT3V
18 T_PHOTO
FP6504
D_GND 1
D_GND 2
V/HPR 3
WD_REMO 4
PLUGIN_L 5
R/GND 6
L/HPL 7
MICGND 8
MICGND 9
MICGND 10
EXTMIC[R] 11
MIC5V 12
MIC5V 13
EXTMIC[L] 14
EXTMIC 15
D_GND 16
D_GND 17
TPB- 18
TPB+ 19
TPA+ 20
TPA- 21
D_GND 22
D_GND 23
D_GND 24
UARTI 25
UARTO 26
CN_H 27
CR_POWER 28
BTSV 29
BTSV 30
5P_DI 31
5P_DO 32
5P_SCK 33
REGD3V 34
S5V 35
VBUS 36
CARD_PRO 37
CARD_DET 38
CARD_DET 39
PP3001
REGA5V 1
MON_E_R_OUT 2
MON_E_G_OUT 3
MON_E_B_OUT 4
MON_E_PLL 5
MON_M_RB_OUT 6
MON_M_G_OUT 7
8
MON_M_PLL 9
CN_H 10
UARTI 11
UATRO 12
MON_M_VCOM 13
EVF_H/L/NC 14
D_W0 15
D_W1 16
SYSTEMRST 17
CAM_VD 18
EVR_SBO 19
EVR_SBI 20
EVR_SBT 21
CAM_AGND 22
VOUT 23
CAM_TST 24
TEST_L 25
HID1 26
ENVELOPE 27
SPA 28
ATFI 29
D_GND 30
EVR
PP2001
SYSTEMRST 1
AFST 2
3
CAM_AFDR_DTO 4
TRST 5
CAM_AFDR_CLK 6
TMS 7
EVR_SBO 8
M_TDO 9
EVR_SBI 10
FP 11
12
13
14
15
16
17
18
19
EVR_SBT 20
TDI 21
22
PON_L 23
D_GND 24
TCK 25
26
VCCJ 27
28
MODE 29
CAMF_VCC 30
EVR2
FP6201
1 CARD_DET
2 CARD_PRO
3 VBUS
4 S5V
5 REGD3V
6 5P_SCK
7 5P_DO
8 5P_DI
9 BTSV
10 BTSV
11 CR_POWER
12 CN_H
13 UARTO
14 UARTI
15 D_GND
16 D_GND
17 D_GND
18 TPA-
19 TPA+
20 TPB+
21 TPB-
22 D_GND
23 D_GND
24 EXTMIC
25 EXTMIC[L]
26 MIC5V
27 MIC5V
28 EXTMIC[R]
29 MICGND
30 MICGND
31 MICGND
32 L/HPL
33 R/GND
34 PLUGIN_L
35 WD_REMO
36 V/HPR
37 D_GND
38 D_GND
39 D_GND
JACK C.B.A.
(NV-GS5 SERIES,GS4 SERIES)
FP6202
VBUS 1
USB_D+ 2
USB_D- 3
DSC_GND 4
DSC_GND 5
DSC_GND 6
CARD_DO 7
CARD_CLK 8
CARD_CMD 9
DSC315V 10
(NV-GS5 SERIES,GS4 SERIES)
HS3401
SD-CARD
JK2501
RS-232C
JK4001
AV 6P
JK4901
EXT MIC
JK2502
SYSTEM
JK3801
DV TERMINAL
(NV-GS5 SERIES,GS4 SERIES,GS3EN/A/ENT)
FP3401
1 DSC315V
2 CARD_CMD
3 CARD_CLK
4 CARD_DO
5 DSC_GND
6 DSC_GND
7 DSC_GND
8 USB_D-
9 USB_D+
10 VBUS
PP3401 / PS3001
(PP3401 / PS3001 pin 1 / pin 2 / signal)
120 1 ——— ——— 120 1 ———
119 2 ——— ——— 119 2 ———
D_GND 118 3 D_GND D_GND 118 3 D_GND
D_GND 117 4 D_GND D_GND 117 4 D_GND
D_GND 116 5 YDATA17 D_GND 116 5 YDATA17
D_GND 115 6 YDATA16 D_GND 115 6 YDATA16
——— 114 7 YDATA15 ——— 114 7 YDATA15
SIF_SDA 113 8 YDATA14 SIF_SDA 113 8 YDATA14
INPUT_SEL 112 9 YDATA13 INPUT_SEL 112 9 YDATA13
EXT_PAUSE 111 10 YDATA12 EXT_PAUSE 111 10 YDATA12
SYIO 110 11 YDATA11 SYIO 110 11 YDATA11
VHPR 109 12 YDATA10 VHPR 109 12 YDATA10
SCIO 108 13 CDATA17 SCIO 108 13 CDATA17
SIF_CS 107 14 CDATA16 SIF_CS 107 14 CDATA16
WIDE_DET 106 15 CDATA15 WIDE_DET 106 15 CDATA15
SYNC_DET 105 16 CDATA14 SYNC_DET 105 16 CDATA14
SIF_XRST 104 17 CDATA13 XRST 104 17 CDATA13
SIF_SCK 103 18 CDATA12 SIF_SCK 103 18 CDATA12
SDOUT_L 102 19 CDATA11 SDOUT_L 102 19 CDATA11
SDIN_L 101 20 CDATA10 SDIN_L 101 20 CDATA10
SDOUT_R 100 21 INH1 SDOUT_R 100 21 INH1
SDIN_R 99 22 INH2 SDIN_R 99 22 INH2
D_WO 98 23 CLK135 D_WO 98 23 CLK135
D_WI 97 24 CLK27B D_W1 97 24 CLK27B
CARD_LED 96 25 INV1 CARD_LED 96 25 INV1
——— 95 26 INV2 ——— 95 26 INV2
——— 94 27 CDATA27 ——— 94 27 CDATA27
DSC_WAKEUP 93 28 CDATA26 DSC_WAKEUP 93 28 CDATA26
DSC_XRST 92 29 CDATA25 DSC_XRST 92 29 CDATA25
DSC_CLK 91 30 CDATA24 DSC_CLK 91 30 CDATA24
DSC_DTO 90 31 CDATA23 DSC_DTO 90 31 CDATA23
DSC_BUSY 89 32 CDATA22 DSC_BUSY 89 32 CDATA22
——— 88 33 CDATA21 ——— 88 33 CDATA21
DSC_RST 87 34 CDATA20 DSC_RST 87 34 CDATA20
DSC_FRP 86 35 YDATA27 DSC_FRP 86 35 YDATA27
DSC_DTI 85 36 YDATA26 DSC_DTI 85 36 YDATA26
——— 84 37 YDATA25 ——— 84 37 YDATA25
——— 83 38 YDATA24 ——— 83 38 YDATA24
——— 82 39 YDATA23 ——— 82 39 YDATA23
——— 81 40 YDATA22 ——— 81 40 YDATA22
——— 80 41 YDATA21 TI1R8V 80 41 YDATA21
——— 79 42 YDATA20 TI1R8V 79 42 YDATA20
——— 78 43 DSC5V ——— 78 43 DSC5V
——— 77 44 DSC5V ——— 77 44 DSC5V
SIF1R8V 76 45 REGA5V SIF1R8V 76 45 REGA5V
SIF1R8V 75 46 REGA5V SIF1R8V 75 46 REGA5V
SH2V 74 47 ——— SH2V 74 47 ———
SH2V 73 48 ——— SH2V 73 48 ———
REG2R5V 72 49 ——— REGA2R5V 72 49 ———
REG2R5V 71 50 ——— REGA2R5V 71 50 ———
——— 70 51 ——— ——— 70 51 ———
——— 69 52 ——— ——— 69 52 ———
——— 68 53 D_GND ——— 68 53 D_GND
——— 67 54 D_GND ——— 67 54 D_GND
D_GND 66 55 D_GND D_GND 66 55 D_GND
D_GND 65 56 D_GND D_GND 65 56 D_GND
D_GND 64 57 D_GND D_GND 64 57 D_GND
——— 63 58 ——— ——— 63 58 ———
——— 62 59 ——— ——— 62 59 ———
——— 61 60 ——— ——— 61 60 ———
SUB CONNECTION
SD AUDIO
EX INPUT
DSC JPEG:NV-GS5 SERIES,GS3EN/A/ENT
DSC MPEG:NV-GS4 SERIES
SUB C.B.A.
BATTERY CATCHER
FP1001
1 GND
2 GND
3 GND
4 GND
5 GND
6 NC
7 D
8 D
9 NC
10 +B
11 +B
12 +B
13 +B
14 +B
MAIN C.B.A.
A
B
C
NV-GS5,GS4,GS3,GS1 INTERCONNECTION SCHEMATIC DIAGRAM
NV-GS5,GS4,GS3,GS1 INTERCONNECTION SCHEMATIC DIAGRAM
12 13 14 15 16 17 18 19 20 21 22

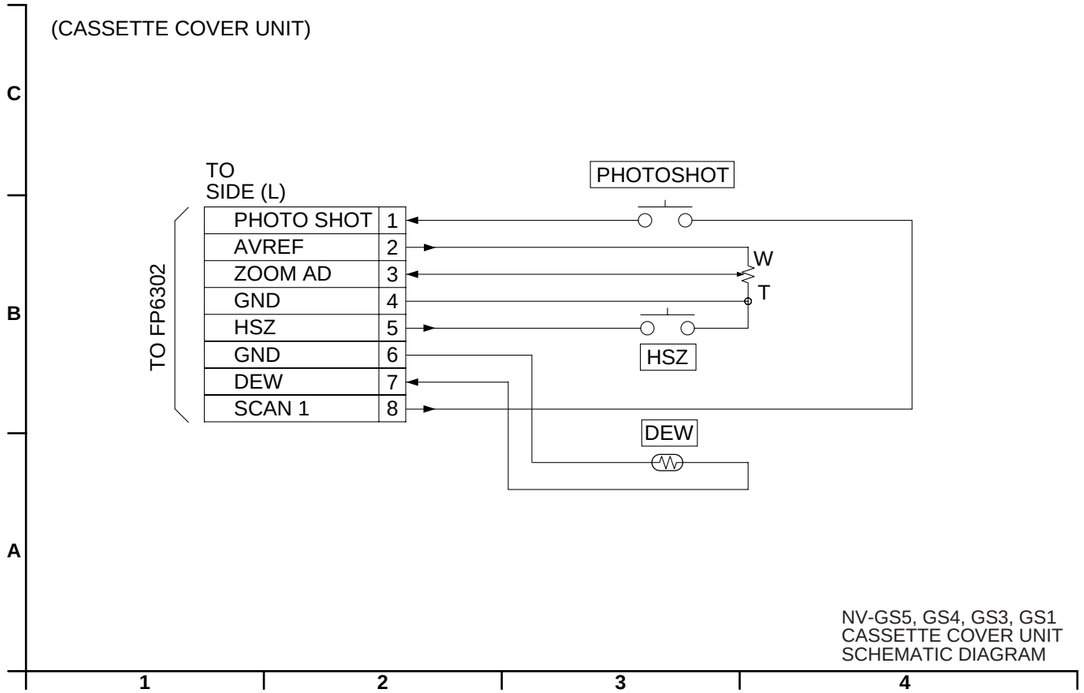
11.3. CCD FLEX. CARD SCHEMATIC DIAGRAM



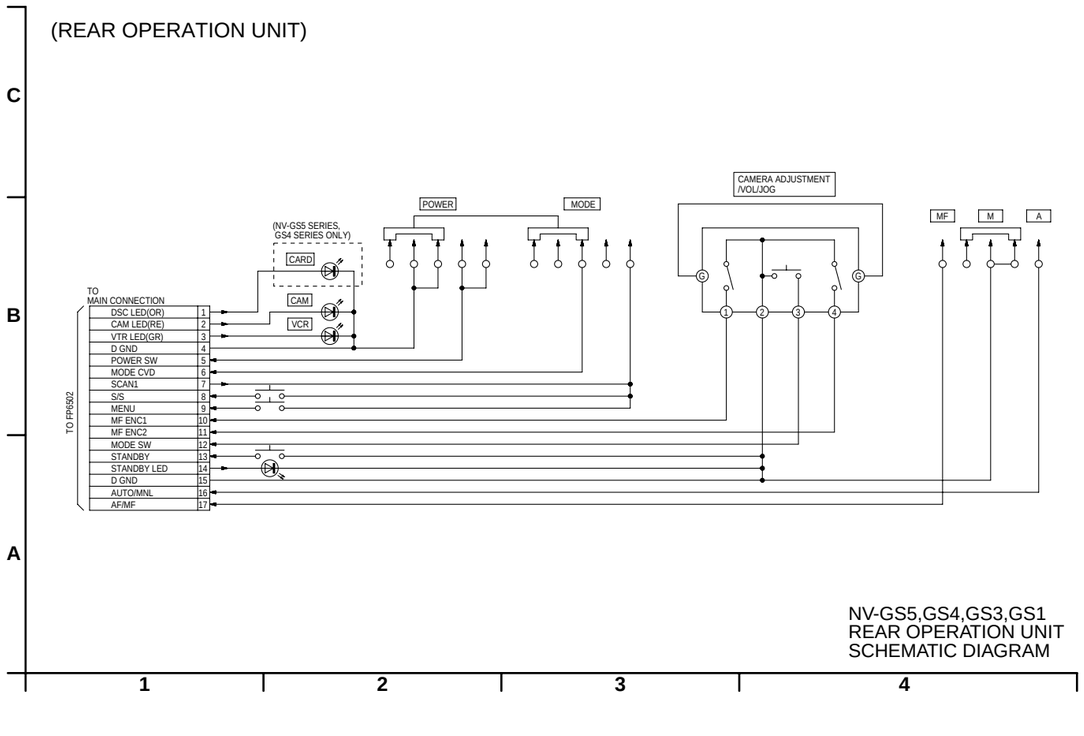
11.4. SIDE (L) SCHEMATIC DIAGRAM



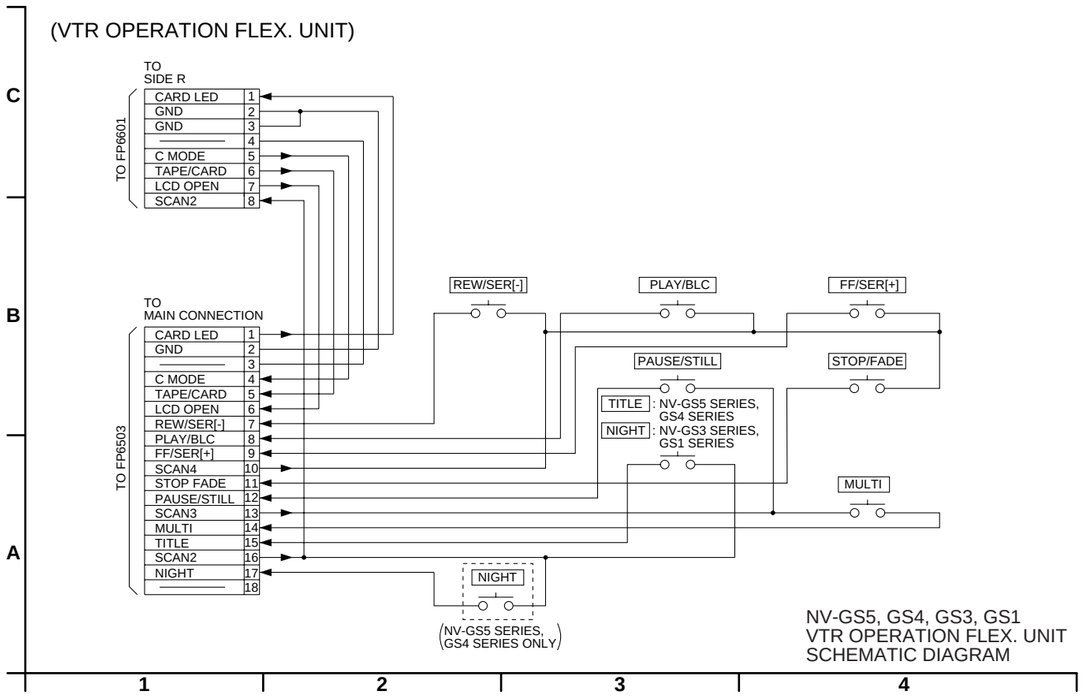
11.5. CASSETTE COVER UNIT SCHEMATIC DIAGRAM



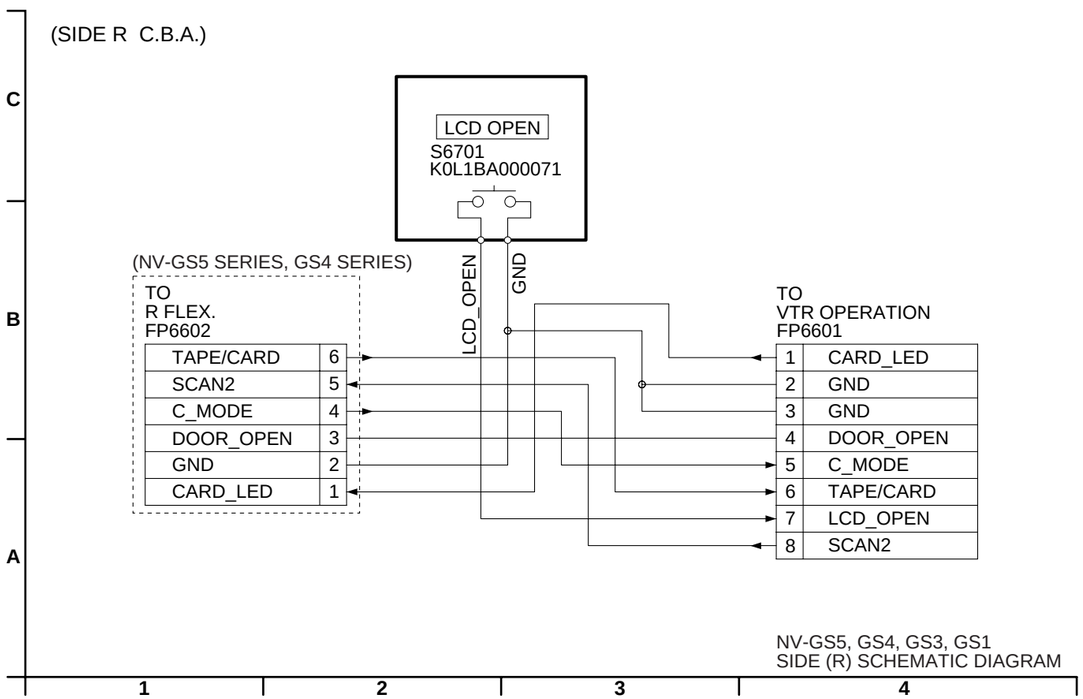
11.6. REAR OPERATION UNIT SCHEMATIC DIAGRAM



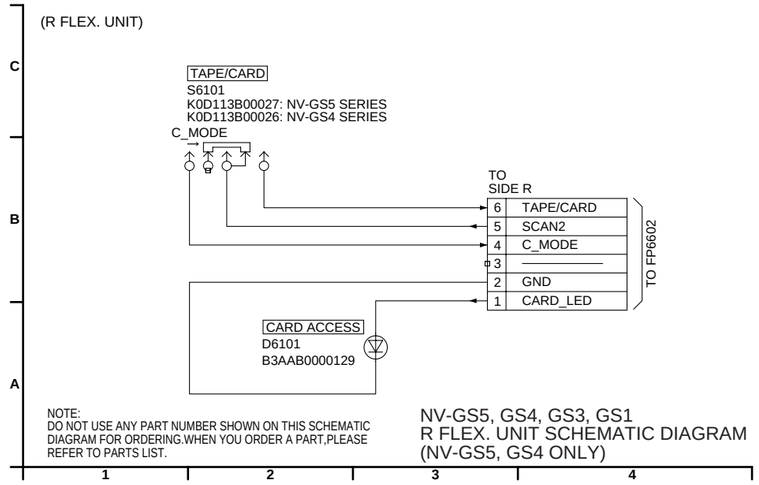
11.7. VTR OPERATION FLEX. UNIT SCHEMATIC DIAGRAM



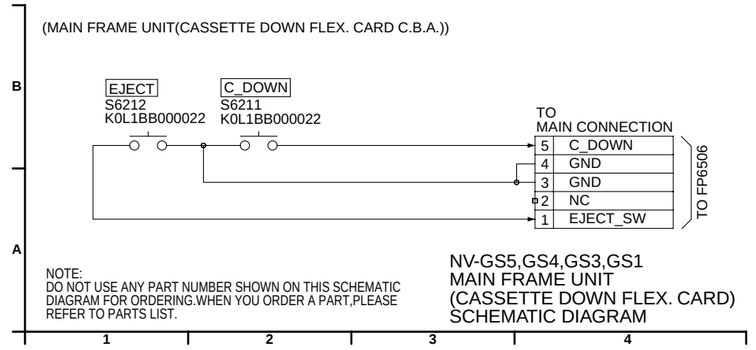
11.8. SIDE (R) SCHEMATIC DIAGRAM



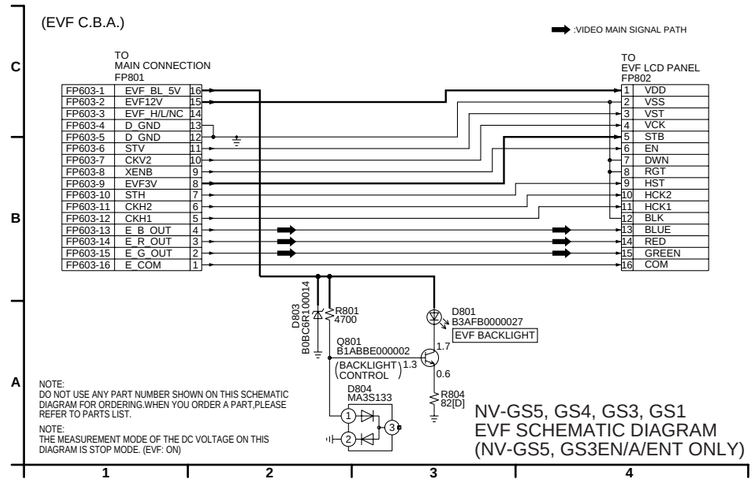
11.9. R FLEX. UNIT SCHEMATIC DIAGRAM (NV-GS5, GS4 ONLY)



11.10. MAIN FRAME UNIT (CASSETTE DOWN FLEX. CARD) SCHEMATIC DIAGRAM

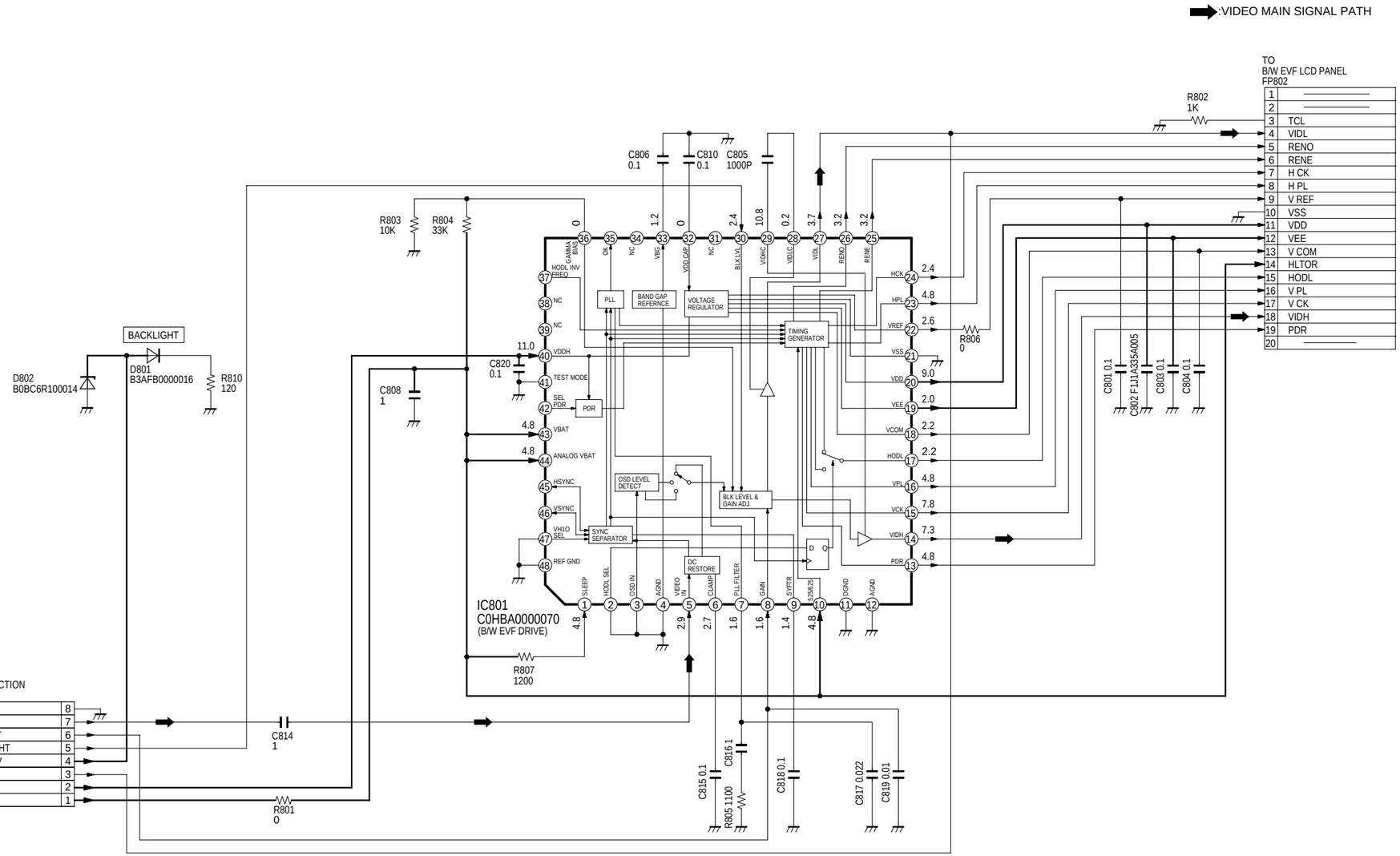


11.11. EVF SCHEMATIC DIAGRAM (NV-GS5, GS3EN/A/ENT ONLY)



11.12. B/W EVF SCHEMATIC DIAGRAM (NV-GS4, GS3EG/EGM/B, GS1 ONLY)

(B/W EVF C.B.A.)

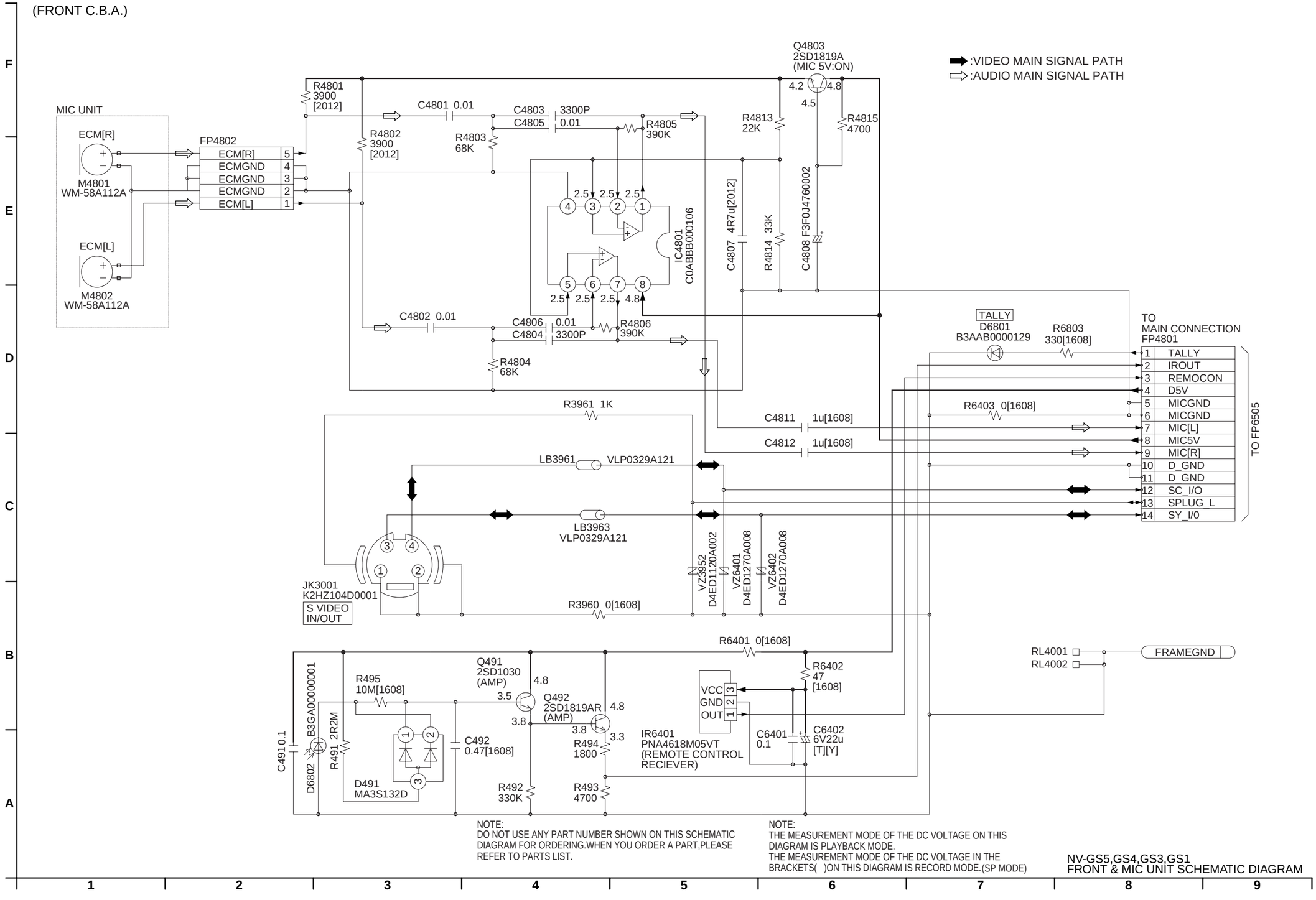


NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

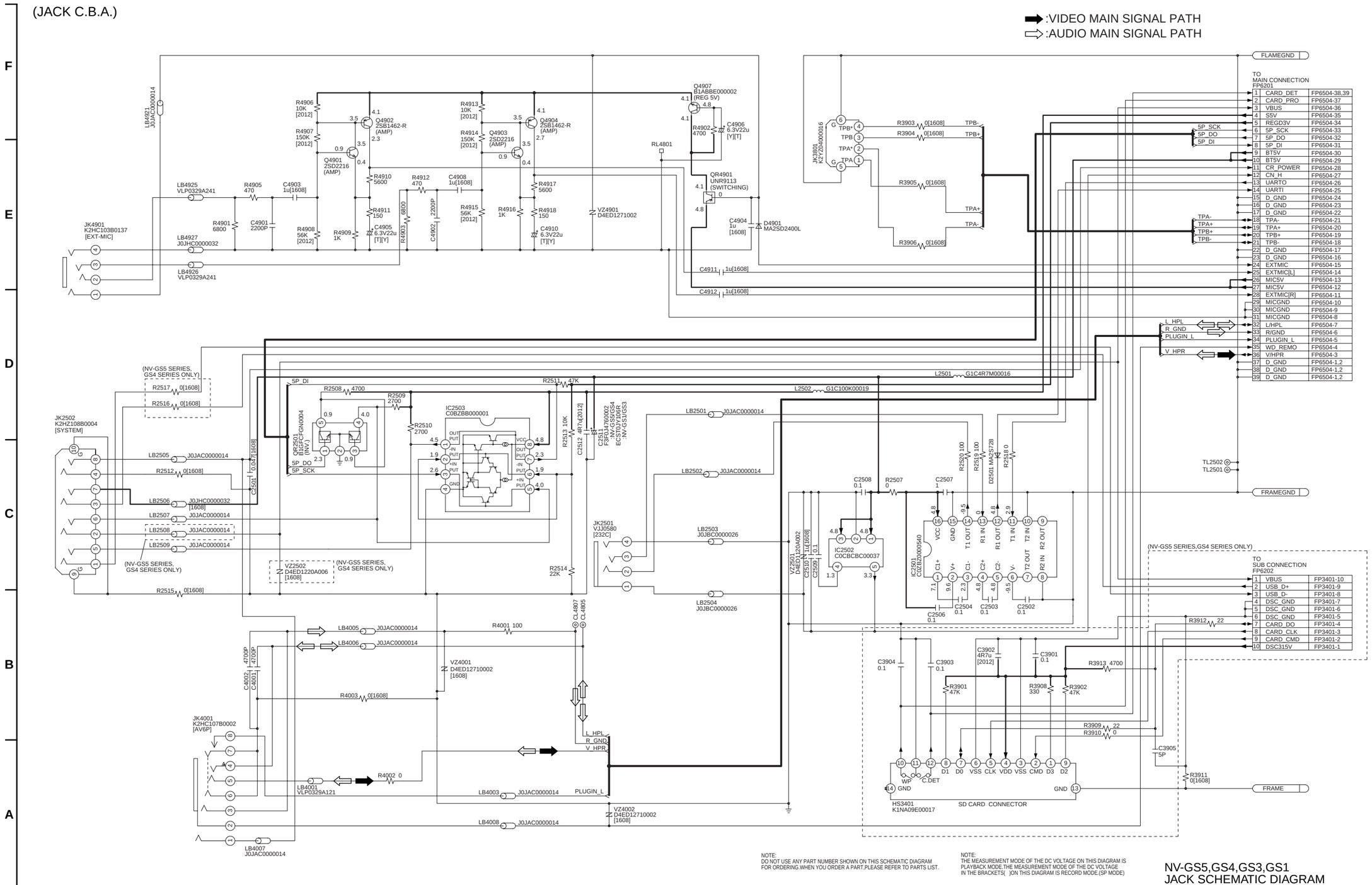
NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGREM IS STOP MODE.(EVF:ON)

NV-GS5,GS4,GS3,GS1
B/W EVF SCHEMATIC DIAGRAM
(NV-GS4,GS3EG/EGM/B,GS1 ONLY)

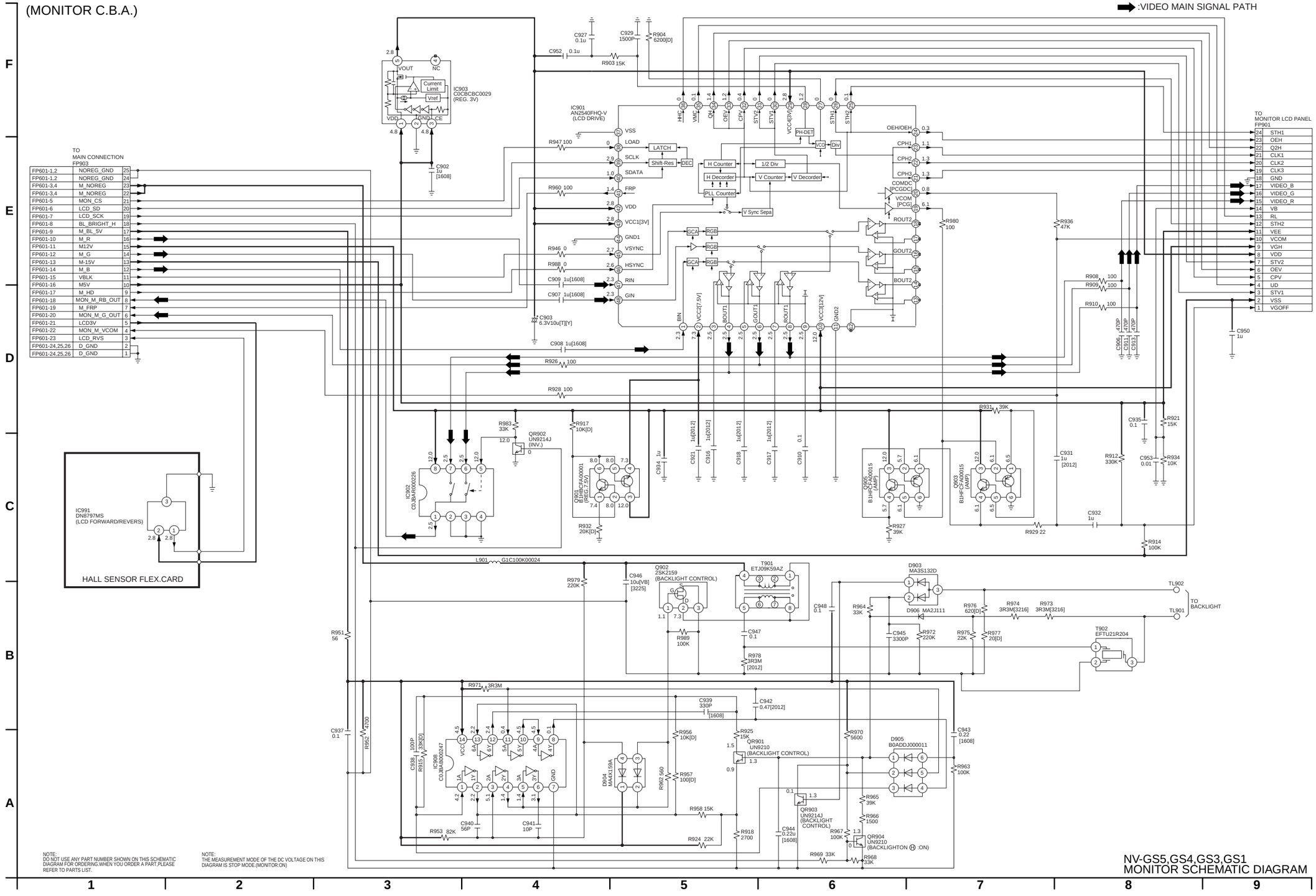
11.13. FRONT & MIC UNIT SCHEMATIC DIAGRAM



11.14. JACK SCHEMATIC DIAGRAM



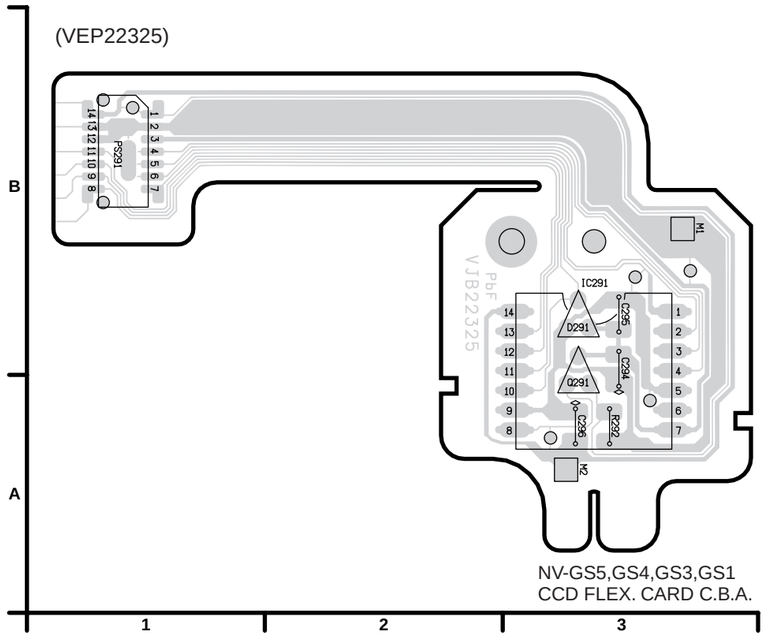
11.15. MONITOR SCHEMATIC DIAGRAM



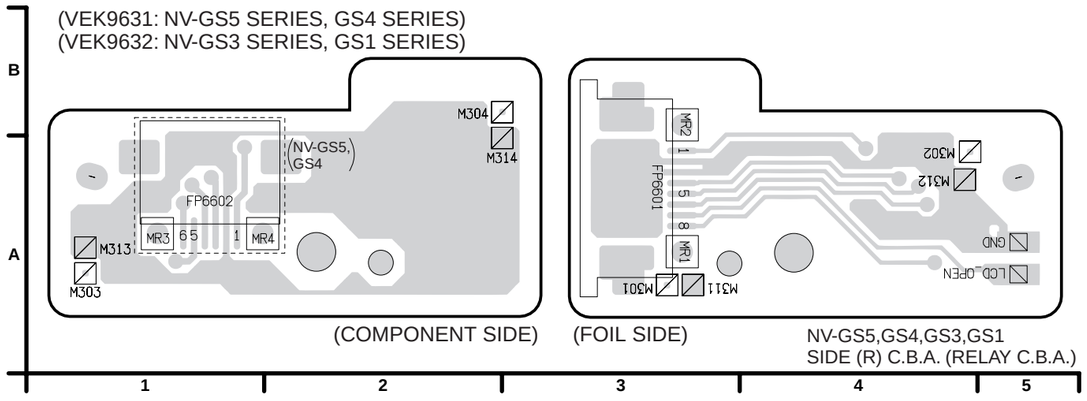
NV-GS5EG

12 CIRCUIT BOARD ASSEMBLIES

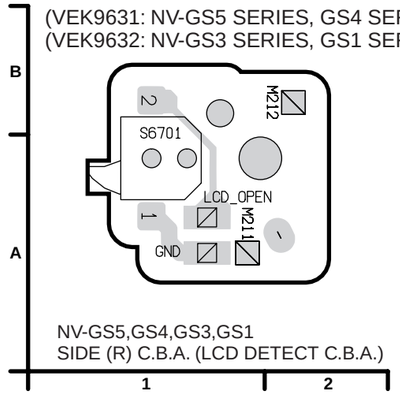
12.1. CCD FLEX. CARD C.B.A.



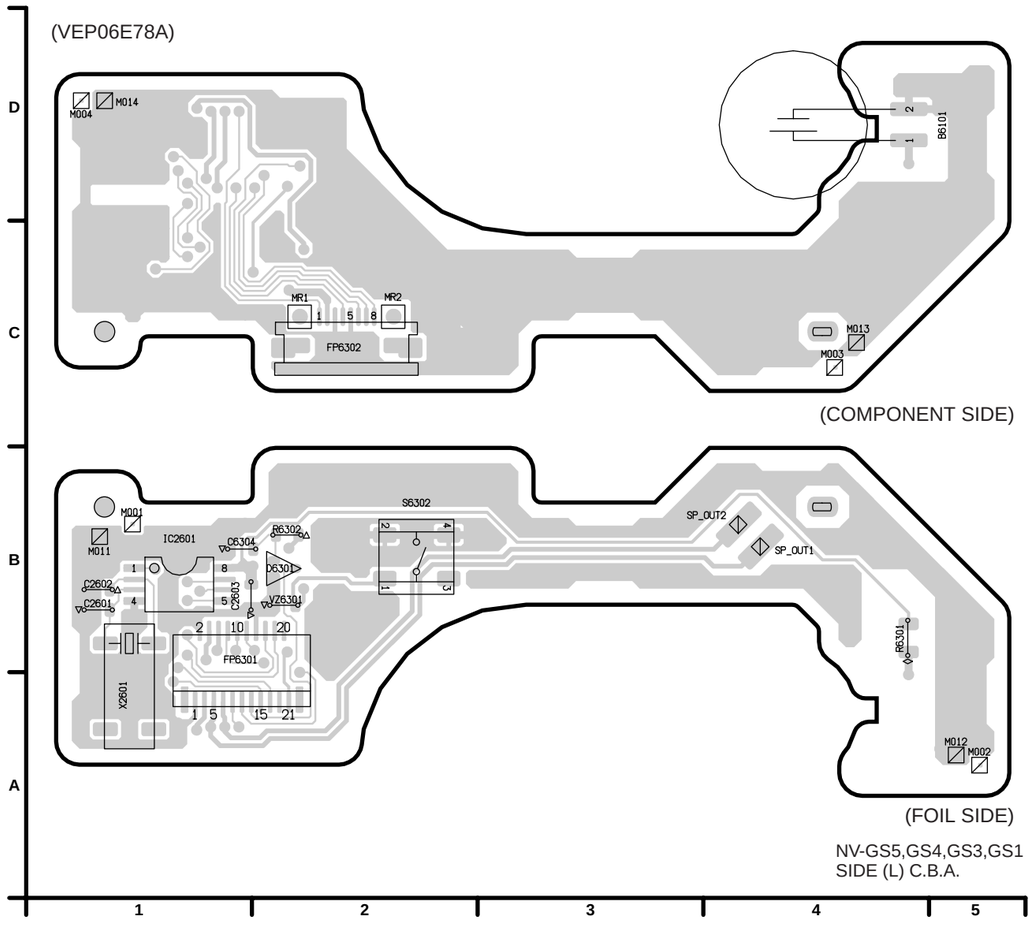
12.2. SIDE (R) C.B.A. (RELAY C.B.A.)



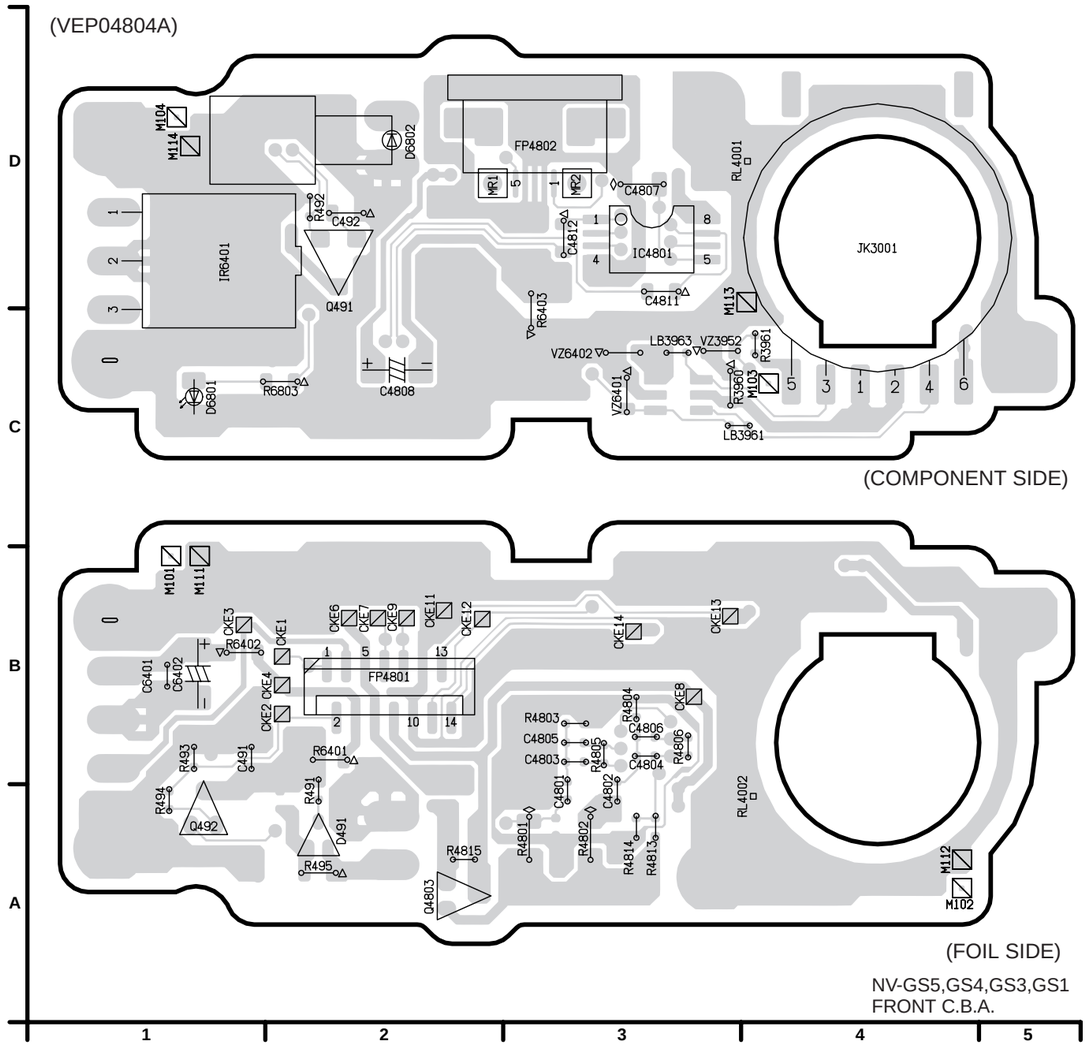
12.3. SIDE (R) C.B.A. (LCD DETECT C.B.A.)



12.4. SIDE (L) C.B.A.



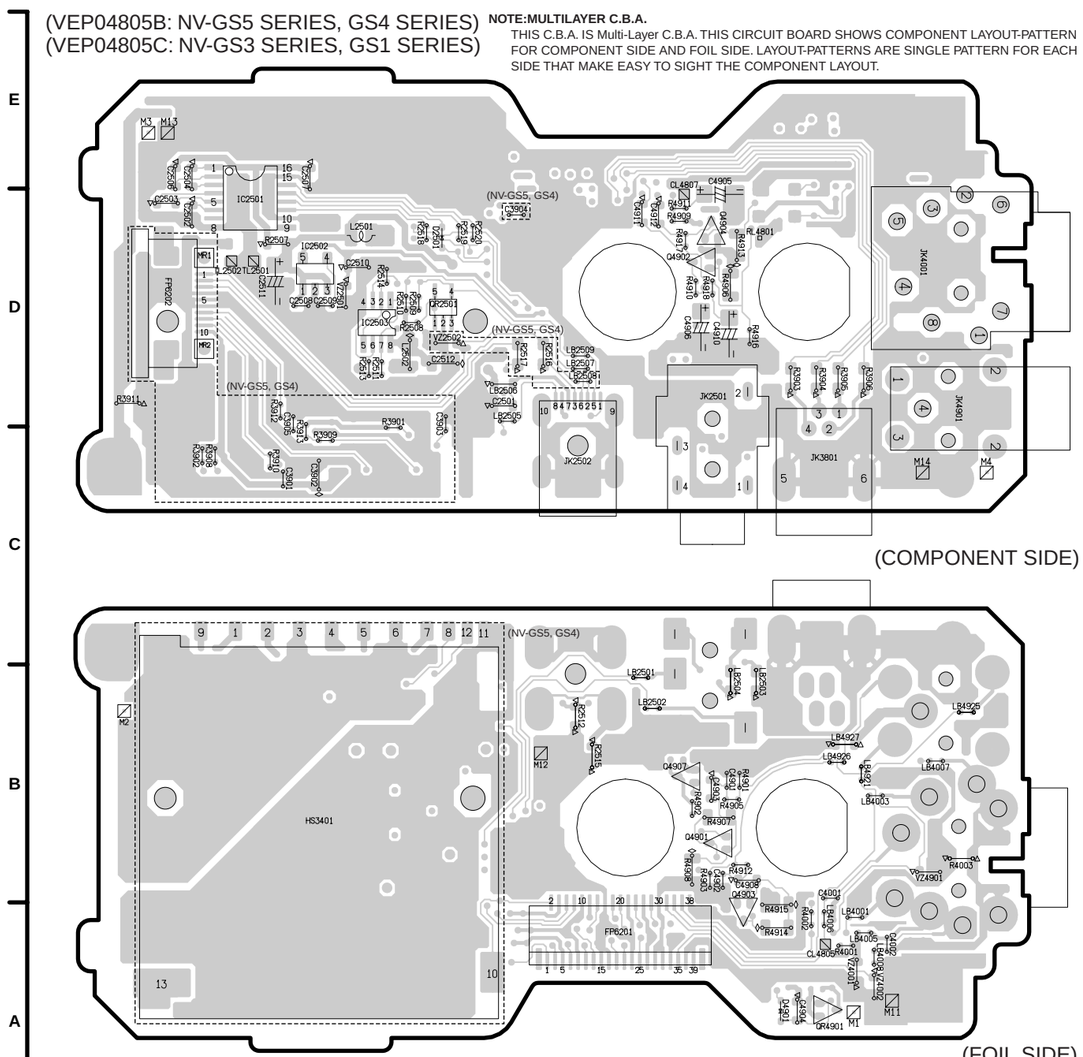
12.5. FRONT C.B.A.



12.6. JACK C.B.A.

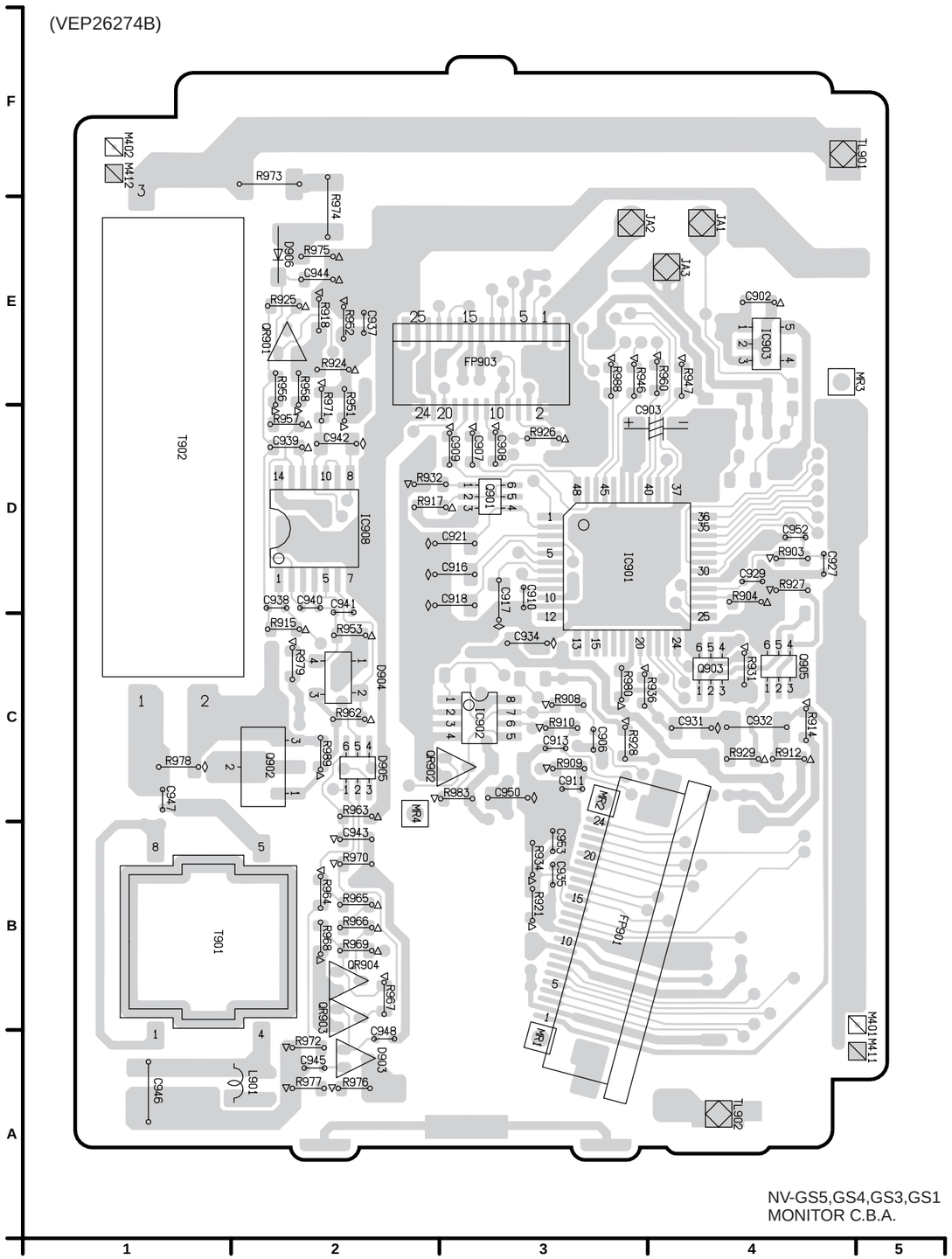
(VEP04805B: NV-GS5 SERIES, GS4 SERIES)
(VEP04805C: NV-GS3 SERIES, GS1 SERIES)

NOTE:MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.



12.7. MONITOR C.B.A.

(VEP26274B)

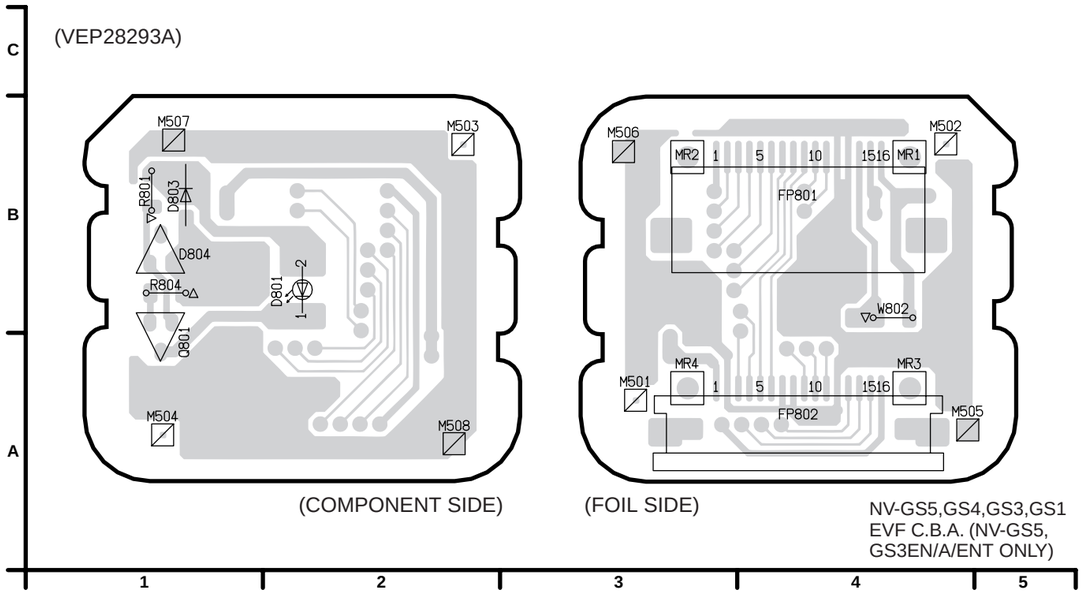


NV-GS5,GS4,GS3,GS1
MONITOR C.B.A.

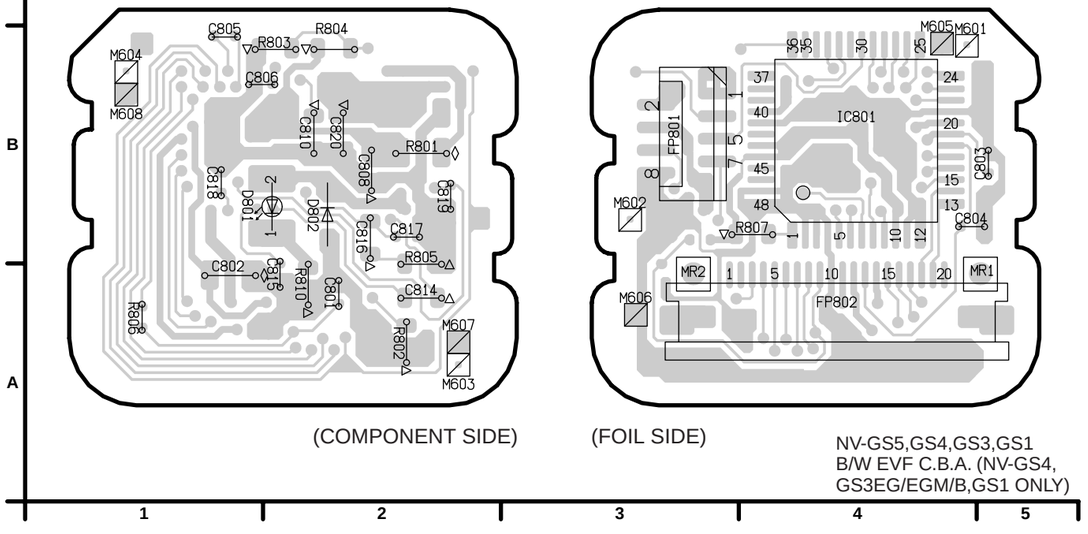
Monitor C.B.A.							
Integrated Circuit		C911	C-3	R924	E-2	R988	E-3
IC901	D-3	C913	C-3	R925	E-2	R989	C-2
IC902	C-3	C916	D-3	R926	D-3		
IC903	E-4	C917	D-3	R927	D-4		
IC908	D-2	C918	D-3	R928	C-3		
Transistor		C921	D-3	R929	C-4		
Q901	D-3	C927	D-4	R931	C-4		
Q902	C-2	C929	D-4	R932	D-2		
Q903	C-4	C931	C-4	R934	B-3		
Q905	C-4	C932	C-4	R936	C-4		
Transistor & Resistor		C934	C-3	R946	E-3		
QR901	E-2	C935	B-3	R947	E-4		
QR902	C-3	C937	E-2	R951	D-2		
QR903	B-2	C938	D-2	R952	E-2		
QR904	B-2	C939	D-2	R953	C-2		
Test Point		C940	D-2	R956	E-2		
TL901	F-4	C941	C-2	R957	D-2		
TL902	A-4	C942	D-2	R958	E-2		
Connector		C943	B-2	R960	E-4		
FP901	B-3	C944	E-2	R962	C-2		
FP903	E-3	C945	A-2	R963	C-2		
Diode		C946	A-1	R964	B-2		
D903	A-2	C947	C-1	R965	B-2		
D904	C-2	C948	A-2	R966	B-2		
D905	C-2	C950	C-3	R967	B-2		
D906	E-2	C952	D-4	R968	B-2		
Transformer		C953	B-3	R969	B-2		
T901	B-1	**Resistor**		R970	B-2		
T902	D-1	R903	D-4	R971	D-2		
Coil		R904	D-4	R972	A-2		
L901	A-2	R908	C-3	R973	F-2		
Capacitor		R909	C-3	R974	E-2		
C902	E-4	R910	C-3	R975	E-2		
C903	D-4	R912	C-4	R976	A-2		
C906	C-3	R914	C-4	R977	A-2		
C907	D-3	R915	C-2	R978	C-1		
C908	D-3	R917	D-2	R979	C-2		
C909	D-3	R918	E-2	R980	C-3		
C910	D-3	R921	B-3	R983	C-3		

ADDRESS INFORMATION

12.8. EVF C.B.A. (NV-GS5, GS3EN/A/ENT ONLY)

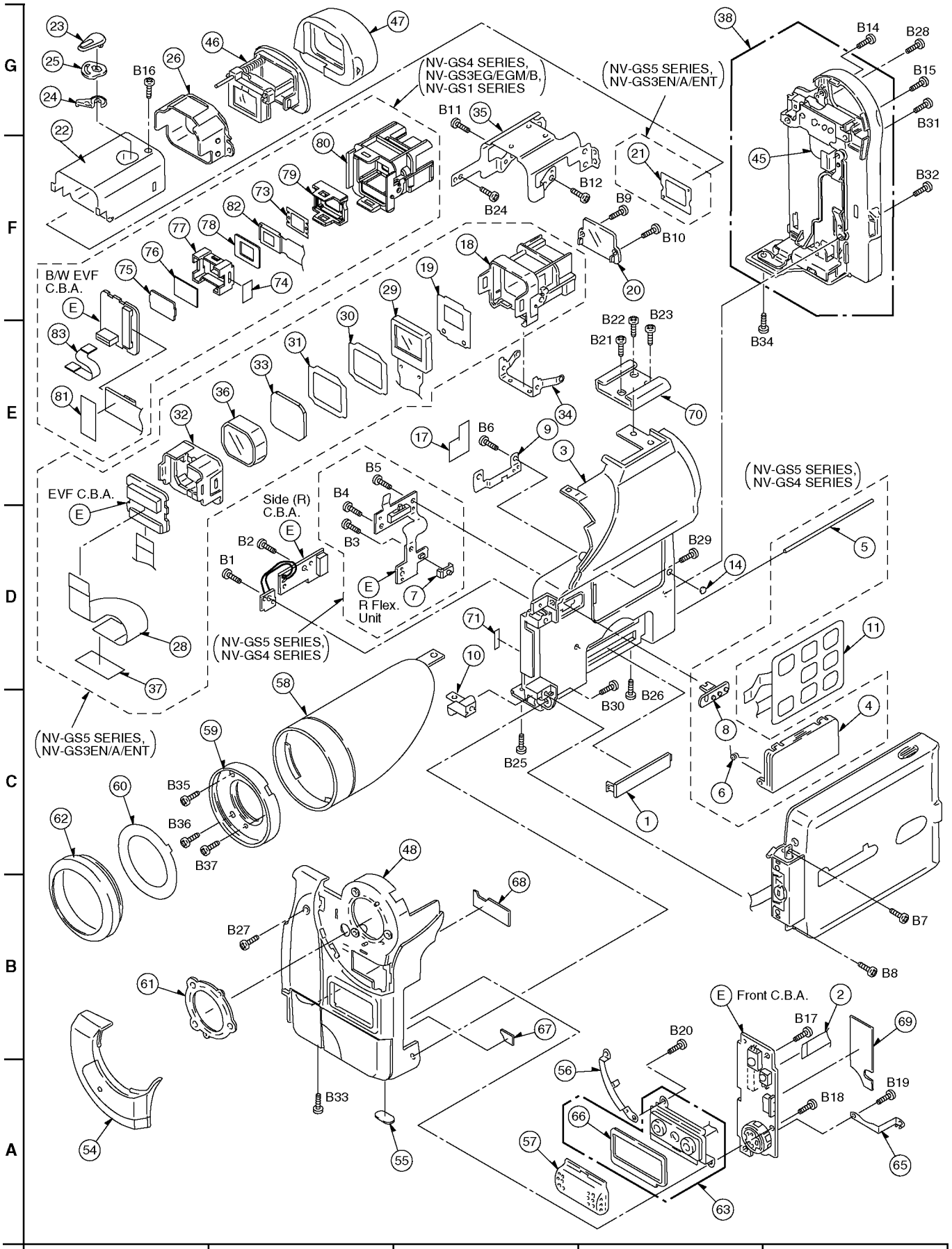


12.9. B/W EVF C.B.A. (NV-GS4, GS3EG/EGM/B, GS1 ONLY)

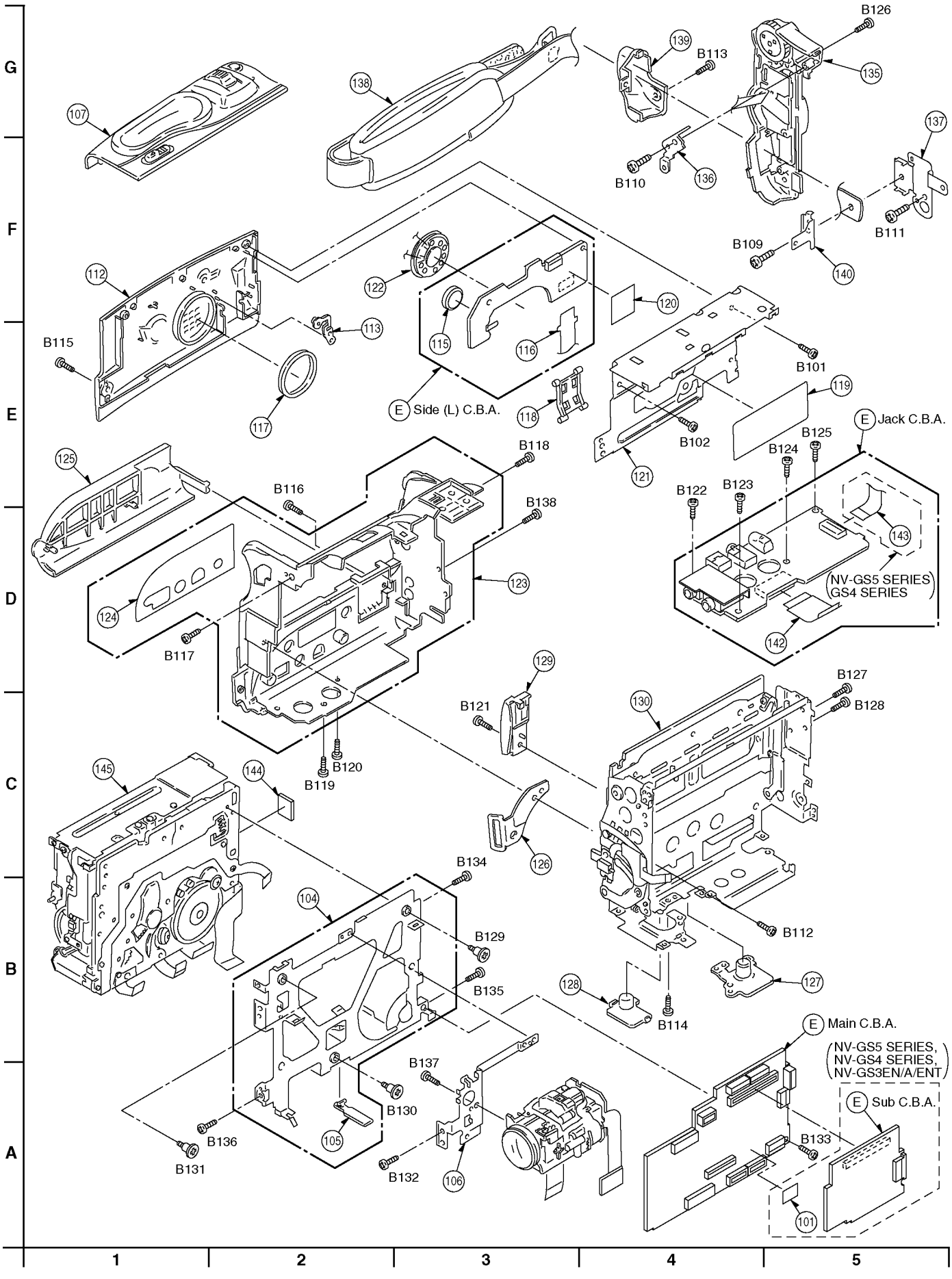


13 EXPLODED VIEWS

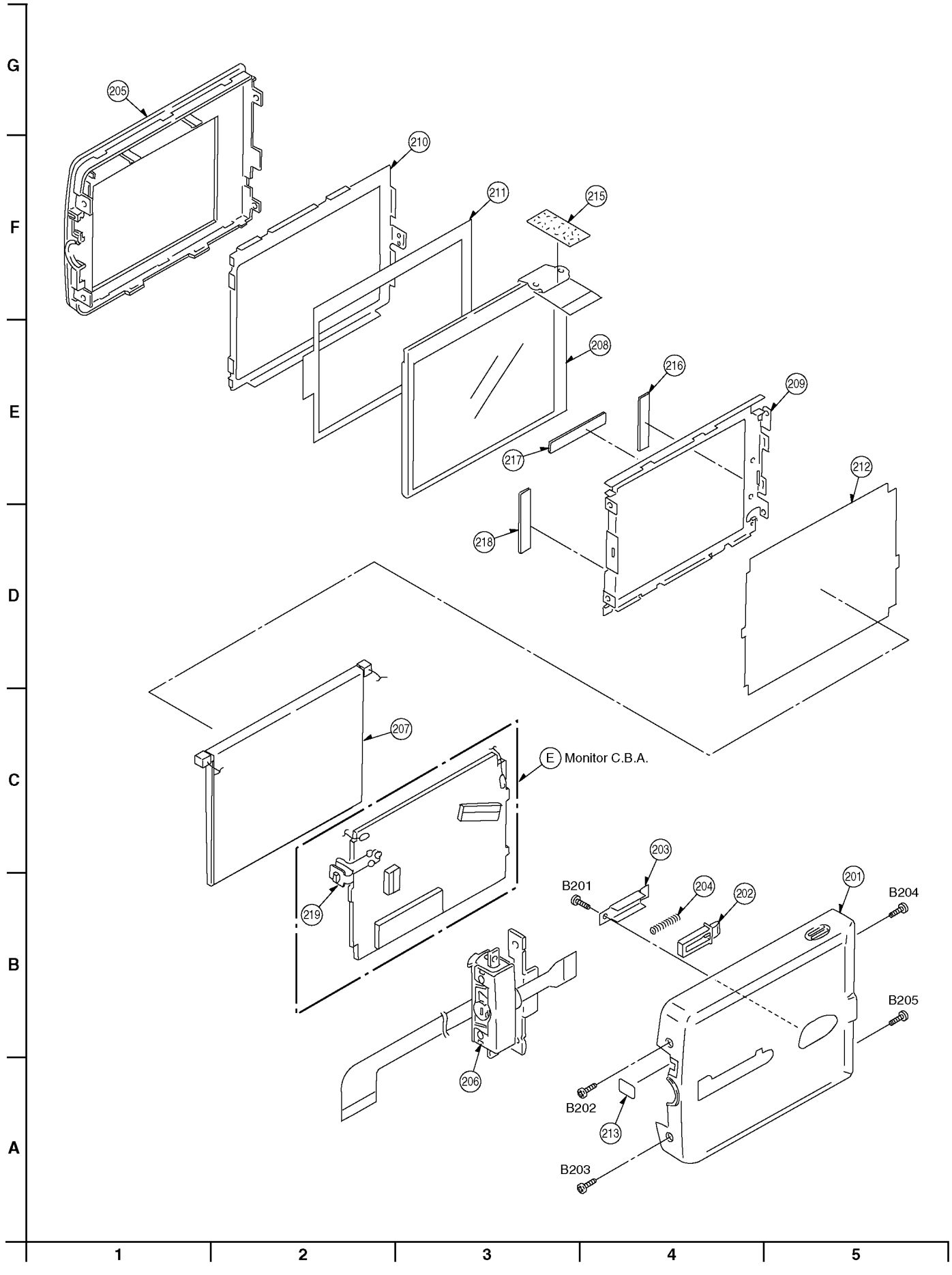
13.1. FRAME & CASING SECTION (1)



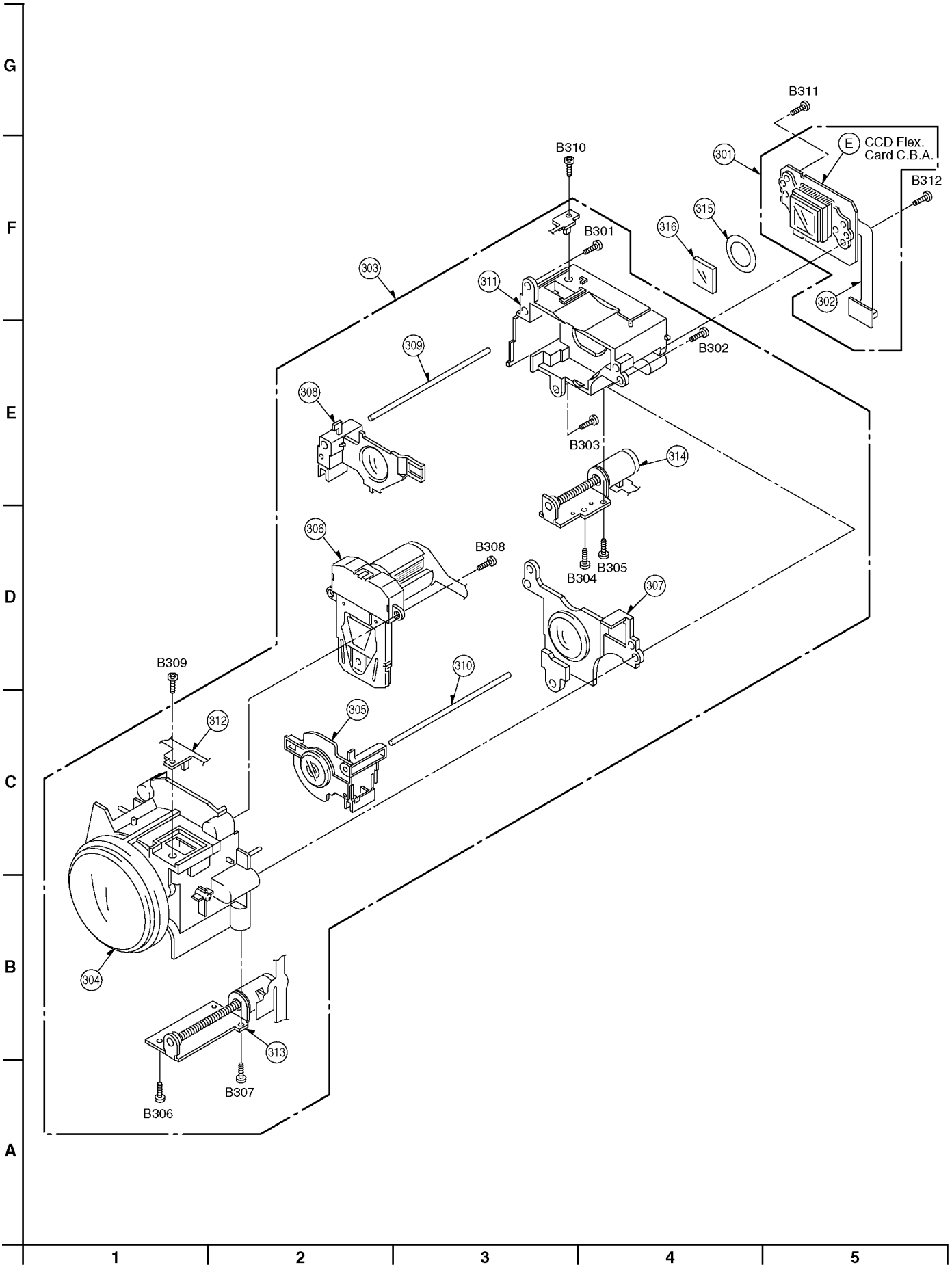
13.2. FRAME & CASING SECTION (2)



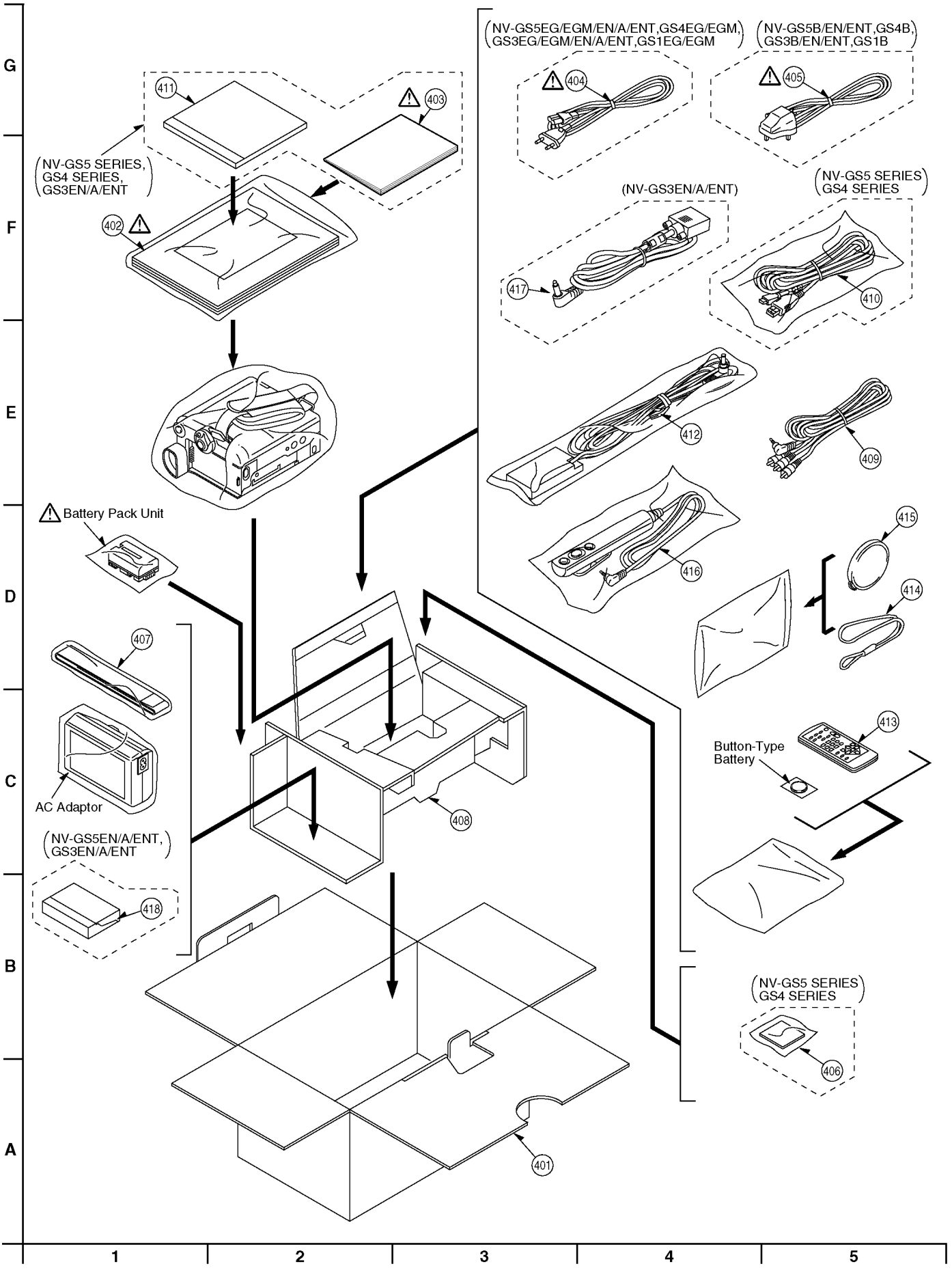
13.3. LCD SECTION



13.4. CAMERA LENS SECTION



13.5. PACKING PARTS & ACCESSORIES SECTION



14 REPLACEMENT PARTS LIST

14.1. FRAME & CASING SECTION
(1) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
1	VKF3522	EVR COVER	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
1	VKF3553	EVR COVER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
2	VWJ1544	FRONT FLEX.	
3	VKM5864	SIDE CASE (R)	NV-GS5EG/EGM/B/EN/A/ENT
3	VKM5888	SIDE CASE (R)	NV-GS4EG/EGM/B
3	VKM5865	SIDE CASE (R)	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
4	VKF3521	SD LID	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
5	VMS7094	SD LID SHAFT	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
6	VMB3598	SD LID SPRING	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
7	VGL0983	SD PANEL LIGHT	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
8	VGU9050	MODE SELECT KNOB	NV-GS5EG/EGM/B/EN/A/ENT
8	VGU9113	MODE SELECT KNOB	NV-GS4EG/EGM/B
9	VMP7095	LENS FRAME (R)	
10	VMP7216	HINGE EARTH PLATE	
11	VEK9634	VTR OPERATION FLEX. U.	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
11	VEK9635	VTR OPERATION FLEX. U.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
14	VMG1405	CUSHION RUBBER	
17	VGQ6734	LENS FLEX. BARRIER	
18	VGQ6559	LCD HOLDING PIECE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
19	VGQ6560	LCD MASK	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
20	VGQ6561	EVF LCD PROTECT PANEL	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
20	VGQ6663	EVF LCD PROTECT PANEL	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
21	VGQ6564	PROTECT PANEL SHEET	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
22	VGQ6563	SLIDE CASE	
23	VGU9051	VIEW ADJ. KNOB	
24	VML3666	VIEW ADJ. LEVER	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
24	VML3681	VIEW ADJ. LEVER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
25	VGQ6636	VIEW ADJ. BASE	
26	VGQ6566	SLIDE CASE HOLDER	
28	VWJ1546	EVF FLEX.	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
29	L5BDDXH00006	EVF LCD PANEL	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
30	VGQ6570	EVF LCD FIXATION TAPE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
31	VGQ6570	EVF LCD FIXATION TAPE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
32	VGQ6558	EVF LCD PRESS PIECE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
33	LSFL0040	LED DIFFUSION SHEET	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
34	VMC1774	EVF CLICK SPRING	
35	VMP7100	EVF FRAME	
36	LSFL0039	LED LENS	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
37	VGQ6740	EVF BARRIER	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
38	VYK0F38	REAR CASE U.	
45	VWJ1543	BUS FLEX.	
46	VYK0E94	EVF VIEW ADJ. U.	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
46	VYK0G09	EVF VIEW ADJ. U.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
47	VMG1432	EYE CAP	
48	VYK0F22	FRONT CASE	
54	VYK0F23	FRONT DECORATION U.	
55	VKA0319	SLIDE PROOF RUBBER	
56	VMP7217	FRONT EARTH PLATE	
57	VYK0E93	MIC NET U.	
58	VGK2780	LENS DECORATION	
59	VDW0791	FRONT SCREW	
60	VGH4541	FRONT NAME PLATE	
61	VMG1431	FRONT CUSHION RUBBER	
62	VYQ2370	LENS HOOD U.	
63	VEK9630	MIC U.	
65	VMP7170	FRONT EARTH ANGLE (LOWER)	
66	VGQ6711	MIC CUSHION	
67	VGQ6737	FRONT PROTECT SHEET (A)	
68	VGQ6738	FRONT PROTECT SHEET (B)	

Ref. No.	Part No.	Part Name & Description	Remarks
69	VGQ6739	FRONT PROTECT SHEET (C)	
70	VMP7101	SHOE HOLD PLATE	
71	VGQ6780	FLEX. SHEET	
73	VGQ6438	B/W EVF MASK	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
74	VGQ6462	B/W EVF FLEX. FIXATION TAPE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
75	VGQ6657	BL DIFFUSION PLATE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
76	VGQ6658	BL POLARIZATION PLATE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
77	VGQ6659	BL HOLDER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
78	VGQ6660	B/W EVF FIXATION TAPE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
79	VGQ6661	B/W EVF LCD PANEL HOLDER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
80	VGQ6662	B/W EVF LCD HOLDING PIECE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
81	VGQ6775	B/W EVF BARRIER	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
82	L5BDAXG00003	B/W EVF LCD PANEL	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
83	VWJ1564	B/W EVF FLEX.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
B1	XQN16+BJ35FZ	SCREW	
B2	XQN16+BJ35FZ	SCREW	
B3	XQN16+BJ35FZ	SCREW	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
B4	XQN16+BJ35FZ	SCREW	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
B5	XQN16+BJ35FZ	SCREW	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
B6	XQN16+BJ3FN	SCREW	
B7	VHD0768	SCREW	
B8	VHD0768	SCREW	
B9	VHD1303	SCREW	
B10	VHD1303	SCREW	
B11	VHD1393	SCREW	
B12	VHD1393	SCREW	
B14	XQN16+B3FZ	SCREW	
B15	XQN16+B3FZ	SCREW	
B16	XQN16+BJ3FZ	SCREW	
B17	XQN16+BJ4FZ	SCREW	
B18	XQN16+BJ4FZ	SCREW	
B19	XQN16+BJ4FZ	SCREW	
B20	XQN16+BJ3	SCREW	
B21	XQS2+A4FN	SCREW	
B22	XQS2+A4FN	SCREW	
B23	XQS2+A4FN	SCREW	
B24	XQN16+B2FN	SCREW	
B25	XQN16+B3FZ	SCREW	
B26	XQN16+B3FZ	SCREW	
B27	XQN16+B5FZ	SCREW	
B28	XQN16+B6FZ	SCREW	
B29	XQN16+BJ6FN	SCREW	
B30	XQN16+BJ6FN	SCREW	
B31	XQN16+B4FZ	SCREW	
B32	XQN16+B4FZ	SCREW	
B33	XQN16+B3FZ	SCREW	
B34	XQN16+B3FZ	SCREW	
B35	XQN16+BJ4FZ	SCREW	
B36	XQN16+BJ4FZ	SCREW	
B37	XQN16+BJ4FZ	SCREW	

14.2. FRAME & CASING SECTION (2) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
101	VMZ3213	BARRIER	NV-GS3EN/A/ENT,NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
104	VYK0E81	MECHA. FRAME U.	
105	VGQ6635	MECHA. FLEX. HOLD PIECE	
106	VMP7098	LENS FRAME (L)	
107	VYK0E96	CASSETTE COVER U. (TOP)	
112	VGP5720	CASSETTE COVER (SIDE)	
113	VGU9054	RESET BUTTON	
115	ML920S/F9D	LITHIUM BATTERY	
116	VWJ1548	SIDE L FLEX.	
117	VGQ5908	SPEAKER SHEET	
118	VGQ6571	GRIP FLEX. HOLD PIECE	
119	VGQ6572	BATTERY PROTECT SHEET	
120	VGQ6580	SIDE L INSULATION SHEET	
121	VMP7107	CASSETTE PLATE	
122	L0AA02A00036	SPEAKER U.	
123	VYK0F33	SIDE CASE (L) U.	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
123	VYK0F66	SIDE CASE (L) U.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
124	VGH4553	JACK NAME PLATE	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
124	VGH4565	JACK NAME PLATE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
125	VKF3523	JACK COVER (L)	
126	VMP7189	GRIP BELT ANGLE (L)	
127	VMP7099	TRIPOD PLATE	
128	VGQ6638	TRIPOD PIECE	
129	VGU9098	CASSETTE DOOR LOCK BUTTON	
130	VYQ2369	MAIN FRAME U.	
135	N9ZZ00000142	REAR OPERATION U.	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT

Ref. No.	Part No.	Part Name & Description	Remarks
135	N9ZZ00000143	REAR OPERATION U.	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
136	VMP7103	SHOULDER BELT ANGLE	
137	VMP7143	GRIP BELT ANGLE (REAR)	
138	VYC0880	GRIP BELT U.	
139	VGQ6639	GRIP BELT PIECE	
140	VMP7142	GRIP BELT FIXATION ANGLE	
142	VWJ1547	JACK FLEX.	
143	VWJ1549	SUB FLEX.	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
144	VGQ6741	MECHA. PROTECT BARRIER	
145	VXY1710	MECHA. UNIT	
B101	XQN16+BJ35FZ	SCREW	
B102	XQN16+BJ35FZ	SCREW	
B109	XQN2+B3	SCREW	
B110	XQN16+BJ4	SCREW	
B111	XQN16+BJ4	SCREW	
B112	XQN16+BJ5FZ	SCREW	
B113	XQN16+BJ5FZ	SCREW	
B114	XQN16+B2FN	SCREW	
B115	VHD1532	SCREW	
B116	XQN16+B3FZ	SCREW	
B117	XQN16+B3FZ	SCREW	
B118	XQN16+B3FZ	SCREW	
B119	XQN16+B3FZ	SCREW	
B120	XQN16+B3FZ	SCREW	
B121	XQN16+B3FZ	SCREW	
B122	XQN16+B3FZ	SCREW	
B123	XQN16+B3FZ	SCREW	
B124	XQN16+B3FZ	SCREW	
B125	XQN16+B3FZ	SCREW	
B126	XQN16+BJ5FZ	SCREW	
B127	VHD1533	SCREW	
B128	VHD1533	SCREW	
B129	VHD1133	SCREW	
B130	VHD1133	SCREW	
B131	VHD1133	SCREW	
B132	XQN16+B2FN	SCREW	
B133	XQN16+B2FN	SCREW	
B134	XQN16+B2FN	SCREW	
B135	XQN16+B2FN	SCREW	
B136	XQN16+B2FN	SCREW	
B137	XQN16+BJ4	SCREW	
B138	XQN16+B3FZ	SCREW	

14.3. LCD SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
201	VYK0F29	LCD CASE (UPPER) U.	NV-GS5EG/EGM/B
201	VYK0G22	LCD CASE (UPPER) U.	NV-GS5EN/A/ENT
201	VYK0G08	LCD CASE (UPPER) U.	NV-GS4EG/EGM/B
201	VYK0F28	LCD CASE (UPPER) U.	NV-GS3EG/EGM/B
201	VYK0G26	LCD CASE (UPPER) U.	NV-GS3EN/A/ENT
201	VYK0F63	LCD CASE (UPPER) U.	NV-GS1EG/EGM/B
202	VGQ6557	LCD LOCK PIECE	
203	VMP7094	LCD LOCK PLATE	
204	VMB3600	LCD LOCK SPRING	
205	VKM5851	LCD CASE (LOWER)	
206	VXD0362	LCD HINGE U.	
207	VYK0F26	BACKLIGHT U.	
208	EDTCA29QJ0	LCD PANEL U.	
209	VMP7093	LCD FRAME	
210	VSC5332	LCDÅ@SHIELD CASE	
211	VGQ6779	LCD SHEET	
212	VGL0991	DIFFUSION SHEET	
213	VGQ4758	PROTECT SHEET	
215	VGQ5507	FLEX. FIXTATION TAPE	
216	VGQ6671	LCD PANEL FIXATION TAPE A	
217	VGQ6671	LCD PANEL FIXATION TAPE A	
218	VGQ6672	LCD PANEL FIXATION TAPE B	
219	VJB06E80	HALL SENSOR FLEX.	
B201	XQS16+AJ3	SCREW	
B202	VHD1459	SCREW	
B203	VHD1459	SCREW	
B204	XQN16+B25FN	SCREW	
B205	XQN16+B25FN	SCREW	

14.4. CAMERA LENS SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
301	VEK9557	CCD U	
302	VJB22325	CCD FLEX.	
303	VXW0522	LENS U.	
304	VXQ1041	LENS MAIN FRAME U.	
305	VXP2155	2ND MOVING FRAME U.	
306	L9ZZ00000189	IRIS U.	
307	VXQ1042	3RD MOVING FRAME U.	
308	VXP2157	4TH MOVING FRAME U.	
309	VMS7082	GUIDE POLE	
310	VMS7082	GUIDE POLE	
311	VDW0784	MASTER FLANGE U.	
312	VEK9403	LENS FLEX. U.	
313	L6HA68ZC0001	ZOOM MOTOR U.	
314	L6HA68ZC0002	FOCUS MOTOR U.	
315	VMX3070	CCD CUSHION	
316	VDL1260	CRYSTAL FILTER	
B301	XQN16+CJ8	SCREW	
B302	XQN16+CJ8	SCREW	
B303	XQN16+CJ8	SCREW	
B304	XQN16+CJ4FY	SCREW	
B305	XQN16+CJ4FY	SCREW	
B306	XQN16+CJ4FY	SCREW	
B307	XQN16+CJ4FY	SCREW	
B308	XQN16+CJ5	SCREW	
B309	XQN16+CJ4FY	SCREW	
B310	XQN16+CJ4FY	SCREW	
B311	XQN16+CJ4FY	SCREW	
B312	XQN16+CJ4FY	SCREW	

14.5. PACKING PARTS & ACCESSORIES SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
401	VPG0N68	PACKING	NV-GS5EG
401	VPG0N69	PACKING	NV-GS5EGM
401	VPG0Q20	PACKING	NV-GS5B
401	VPG0N71	PACKING	NV-GS5EN/A/ENT
401	VPG0N90	PACKING	NV-GS4EG
401	VPG0N91	PACKING	NV-GS4EGM
401	VPG0N92	PACKING	NV-GS4B
401	VPG0N74	PACKING	NV-GS3EG
401	VPG0N75	PACKING	NV-GS3EGM
401	VPG0N76	PACKING	NV-GS3B
401	VPG0N77	PACKING	NV-GS3EN/A/ENT
401	VPG0N79	PACKING	NV-GS1EG
401	VPG0N80	PACKING	NV-GS1EGM
401	VPG0N81	PACKING	NV-GS1B
402	VQT9668	OPERATING INSTRUCTIONS (GERMAN,FRENCH,ITALIAN,DUTCH)	⚠ NV-GS1EG,NV-GS3EG,NV-GS4EG,NV-GS5EG
402	VQT9669	OPERATING INSTRUCTIONS (PORTUGUESE,SPANISH,SWEDISH,DANISH)	⚠ NV-GS1EGM,NV-GS3EGM,NV-GS4EGM,NV-GS5EGM,
402	VQT9670	OPERATING INSTRUCTIONS (ENGLISH)	⚠ NV-GS1B,NV-GS3B,NV-GS4B,NV-GS5B,
402	VQT9671	OPERATING INSTRUCTIONS (CHINESE,ENGLISH,RUSSIAN,ARABIC)	⚠ NV-GS3EN/ENT,NV-GS5EN/ENT
402	VQT9795	OPERATING INSTRUCTIONS (ENGLISH)	⚠ NV-GS3A,NV-GS5A
403	VQT9833	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (GERMAN,FRENCH,ITALIAN,DUTCH)	⚠ NV-GS5EG
403	VQT9834	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (PORTUGUESE,SPANISH,SWEDISH,DANISH)	⚠ NV-GS5EGM
403	VQT9835	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (ENGLISH)	⚠ NV-GS5B/A
403	VQT9836	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (CHINESE,ENGLISH,RUSSIAN,ARABIC)	⚠ NV-GS5EN/ENT
403	VQT9830	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (GERMAN,FRENCH,ITALIAN,DUTCH)	⚠ NV-GS4EG
403	VQT9831	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (PORTUGUESE,SPANISH,SWEDISH,DANISH)	⚠ NV-GS4EGM
403	VQT9832	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (ENGLISH)	⚠ NV-GS4B
403	VQT9828	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (CHINESE,ENGLISH,RUSSIAN,ARABIC)	⚠ NV-GS3EN/ENT
403	VQT9829	OPERATING INSTRUCTIONS FOR PC KIT (CD-ROM) (ENGLISH)	⚠ NV-GS3A
404	K2CR2DA00004	AC CORD	⚠ NV-GS1EG/EGM,NV-GS3EG/EGM/EN/ENT,NV-GS4EG/EGM,NV-GS5EG/EGM/EN/ENT
404	K2CJ2DA00002	AC CORD	⚠ NV-GS3A,NV-GS5A
405	VJA0940	AC CORD	⚠ NV-GS1B,NV-GS3B/EN/ENT,NV-GS4B,NV-GS5B/EN/ENT
406	RP-SD008BVE0	SD CARD	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
407	VFC3506-1A	SHOULDER BELT	
408	VPN5715	CUSHION	
409	K2KC4CB00002	AV CABLE	
410	VFA0363	USB CABLE	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
411	VFF0155-S	CD-ROM FOR PC KIT	NV-GS5EG/EGM/B/EN/A/ENT
411	VFF0154-S	CD-ROM FOR PC KIT	NV-GS4EG/EGM/B
411	VFF0153-S	CD-ROM FOR PC KIT	NV-GS3EN/A/ENT
412	K2GJ2DZ00014	DC CABLE	
413	N2QAEC000003	REMOTE CONTROLLER	
414	VGQ5327	HOOD STRAP	
415	VYF2841	HOOD CAP U.	
416	N2QCAD000001	UNIVERSAL REMOTE CONTROLLER	
417	K1V208A10002	INTERFACE CABLE	NV-GS3EN/A/ENT
418	VFK1451	HEAD CLEANING CASSETTE	NV-GS3EN/A/ENT,NV-GS5EN/A/ENT

14.6. ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE: Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=uuF.
4. The P.C. Board units marked width "■" show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP03G17E	MAIN C.B.A.	(RTL)NV-GS1EG/EGM/B
■	VEP03G17D	MAIN C.B.A.	(RTL)NV-GS3EG/EGM/B
■	VEP03G17C	MAIN C.B.A.	(RTL)NV-GS3EN/A/ENT
■	VEP03G17F	MAIN C.B.A.	(RTL)NV-GS4EG/EGM/B
■	VEP03G17B	MAIN C.B.A.	(RTL)NV-GS5EG/EGM/B/EN/A/ENT
■	VEP03G18C	SUB C.B.A.	(RTL)NV-GS3EN/A/ENT
■	VEP03G19D	SUB C.B.A.	(RTL)NV-GS4EG/EGM/B
■	VEP03G18B	SUB C.B.A.	(RTL)NV-GS5EG/EGM/B/EN/A/ENT
■	VEP22325	CCD FLEX. CARD U.	(RTL)

Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP06E78A	SIDE (L) C.B.A.	(RTL)
■	VEP04805C	JACK C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
■	VEP04805B	JACK C.B.A.	(RTL)NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
■	VEK9632	SIDE (R) C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
■	VEK9631	SIDE (R) C.B.A.	(RTL)NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
■	VEP000X4B	R FLEX. UNIT	(RTL)NV-GS4EG/EGM/B
■	VEP000X4A	R FLEX. UNIT	(RTL)NV-GS5EG/EGM/B/EN/A/ENT
■	VEP26274B	MONITOR C.B.A.	(RTL)
■	VEP28295A	B/W EVF C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
■	VEP28293A	EVF C.B.A.	(RTL)NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
■	VEP04804A	FRONT C.B.A.	(RTL)
■	VEP22325	CCD FLEX. CARD U.	(RTL)
C294	ECUV1C105KBN	C.CAPACITOR CH 16V 1U	F1J1C105A091
C295	ECUV1E104KBN	C.CAPACITOR CH 25V 0.1U	F1J1E1040007
R292	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	
D291	MA143	DIODE	
Q291	2SC3930	CHIP TRANSISTOR	
	VJS3537A014G	CONNECTOR (FEMALE) 14P	K1MN14A00039
■	VEP06E78A	SIDE (L) C.B.A.	(RTL)
B6101	ML920S/F9D	LITHIUM BATTERY	
C2601	ECUX1H060DCV	C.CAPACITOR CH 50V 6P	
C2602	ECUX1H060DCV	C.CAPACITOR CH 50V 6P	
C2603	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K
C6304	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	
D6301	MA133	DIODE	MA3S133
FP6301	K1MN21B00036	CONNECTOR	
FP6302	VJS4298B008	CONNECTOR (FEMALE) 8P	K1MN08B00048
IC2601	S3514AEFSTB	IC	C1ZBZ0001483
R6301	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	
R6302	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	
S6302	VSP1102	SWITCH	K0H1BA000260

Ref. No.	Part No.	Part Name & Description	Remarks
VZ6301	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
X2601	VSX0601	CRYSTAL OSCILLATOR	H0J327200051
.	VWJ1548	SIDE L FPC	
■	VEP04805C	JACK C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
■	VEP04805B	JACK C.B.A.	(RTL)NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C2501	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	ECJ1XB1C473K
C2502	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K
C2503	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K
C2504	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K
C2506	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	ECJ1XB1C104K
C2507	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C2508	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C2509	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C2510	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C2511	ECST0JY106ZR	T.CAPACITOR CH 6.3V 10U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT ECST0JY106R
C2511	F3F0J4760002	TANTALUM CAPACITOR	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C2512	ECUV0J475KBN	C.CAPACITOR CH 6.3V 4.7U	F1J0J4750004
C3901	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C3902	ECUV0J475KBN	C.CAPACITOR CH 6.3V 4.7U	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT F1J0J4750004
C3903	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C3904	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C3905	ECUX1H050CCQ	C.CAPACITOR CH 50V 5P	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
C4001	ECUX1E472KBQ	C.CAPACITOR CH 25V 4700P	
C4002	ECUX1E472KBQ	C.CAPACITOR CH 25V 4700P	
C4901	ECUX1E222KBQ	C.CAPACITOR CH 25V 2200P	
C4902	ECUX1E222KBQ	C.CAPACITOR CH 25V 2200P	
C4903	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4904	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4905	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007

Ref. No.	Part No.	Part Name & Description	Remarks
C4906	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C4908	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4910	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
C4911	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4912	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
D2501	MA2S728	DIODE	
D4901	MA2SD2400L	DIODE	
FP6201	K1MN39B00004	CONNECTOR	
FP6202	VJS3320D010	CONNECTOR (FEMALE) 10P	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT K1MN10B00042
HS3401	K1NA09E00017	K1NA09E00017	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
IC2501	C0ZBZ0000540	IC	
IC2502	C0CBCBC00037		
IC2503	NJM2407R	IC	C0BZBB000001
JK2501	VJJ0580	JACK (4P)	
JK2502	K2HZ108B0004	8-PIN JACK	
JK3801	K2YZ04000016	JACK	
JK4001	K2HC107B0002	JACK	
JK4901	K2HC103B0137	JACK	
L2501	VLQ0855M4R7	COIL 4.7UH	G1C4R7M00016
L2502	VLQ0911K100	COIL 10UH	G1C100K00019
LB2501	J0JAC0000014	FILTER	J0JAC0000016
LB2502	J0JAC0000014	FILTER	J0JAC0000016
LB2503	VLF1143A102	COIL 1000UH	J0JBC0000026
LB2504	VLF1143A102	COIL 1000UH	J0JBC0000026
LB2505	J0JAC0000014	FILTER	J0JAC0000016
LB2506	J0JHC0000032	FILTER	
LB2507	J0JAC0000014	FILTER	J0JAC0000016
LB2508	J0JAC0000014	FILTER	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT J0JAC0000016
LB2509	J0JAC0000014	FILTER	J0JAC0000016
LB4001	VLP0329A121	CHIP BEAD	
LB4003	J0JAC0000014	FILTER	J0JAC0000016
LB4005	J0JAC0000014	FILTER	J0JAC0000016
LB4006	J0JAC0000014	FILTER	J0JAC0000016
LB4007	J0JAC0000014	FILTER	J0JAC0000016
LB4008	J0JAC0000014	FILTER	J0JAC0000016
LB4921	J0JAC0000014	FILTER	J0JAC0000016
LB4925	VLP0329A241	COIL	
LB4926	VLP0329A241	COIL	
LB4927	J0JHC0000032	FILTER	
Q4901	2SD2216	TRANSISTOR	2SD22160R
Q4902	2SB1462-R	TRANSISTOR	2SB14620R
Q4903	2SD2216	TRANSISTOR	2SD22160R
Q4904	2SB1462-R	TRANSISTOR	2SB14620R
Q4907	B1ABBE000002	TRANSISTOR	
QR2501	RN1706R	TRANSISTOR-RESISTOR	B1GFCFGN0004
QR4901	UN9113	TRANSISTOR-RESISTOR	UNR9113
R2507	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R2508	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X

Ref. No.	Part No.	Part Name & Description	Remarks
R2509	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	ERJ2GEJ272X
R2510	ERJ2GEJ272	M.RESISTOR CH 1/16W 2.7K	ERJ2GEJ272X
R2511	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	
R2512	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R2513	ERJ2GEJ103	M.RESISTOR CH 1/16W 10K	
R2514	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	
R2515	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R2516	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R2517	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R2518	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	
R2519	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	
R2520	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	
R3901	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R3902	ERJ2GEJ473	M.RESISTOR CH 1/16W 47K	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R3903	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3904	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3905	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3906	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3908	ERJ2GEJ331X	M.RESISTOR CH 1/16W 330	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT ERJ2RMJ331X
R3909	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT ERJ2RMJ220X
R3910	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
R3911	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3912	ERJ2GEJ220X	M.RESISTOR CH 1/16W 22	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT ERJ2RMJ220X
R3913	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT ERJ2RMJ472X
R4001	ERJ2GEJ101	M.RESISTOR CH 1/16W 100	
R4002	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	
R4003	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R4901	ERJ2GEJ682X	M.RESISTOR CH 1/16W 6.8K	ERJ2RMJ682X
R4902	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R4903	ERJ2GEJ682X	M.RESISTOR CH 1/16W 6.8K	ERJ2RMJ682X
R4905	ERJ2GEJ471X	M.RESISTOR CH 1/16W 470	ERJ2RMJ471X
R4906	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	

Ref. No.	Part No.	Part Name & Description	Remarks
R4907	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	
R4908	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	
R4909	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R4910	ERJ2GEJ562X	M.RESISTOR CH 1/16W 5.6K	
R4911	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	ERJ2GEJ151X
R4912	ERJ2GEJ471X	M.RESISTOR CH 1/16W 470	ERJ2RMJ471X
R4913	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	
R4914	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	
R4915	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	
R4916	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R4917	ERJ2GEJ562X	M.RESISTOR CH 1/16W 5.6K	
R4918	ERJ2GEJ151	M.RESISTOR CH 1/16W 150	ERJ2GEJ151X
VZ2501	D4ED1120A002	TRANSIENT/SURGE ABSORBER	
VZ2502	D4ED1220A006	TRANSIENT/SURGE ABSORBER	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
VZ4001	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
VZ4002	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
VZ4901	VRT0158	TRANSIENT/SURGE ABSORBER	D4ED12710002
.	VWJ1547	JACK FPC	
.	VGQ6781	JACK BARRIER	
.	VWJ1549	SUB FPC	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
■	VEK9632	SIDE (R) C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/EGM/B/EN/A/ENT
■	VEK9631	SIDE (R) C.B.A.	(RTL)NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT
FP6601	VJS4273B008	CONNECTOR (FEMALE) 8P	
FP6602	VJS3931B006	CONNECTOR (FEMALE) 6P	NV-GS4EG/EGM/B,NV-GS5EG/EGM/B/EN/A/ENT K1MN06B00056
S6701	K0L1BA000071	SWITCH	
■	VEP000X4B	R FLEX. UNIT	(RTL)NV-GS4EG/EGM/B
■	VEP000X4A	R FLEX. UNIT	(RTL)NV-GS5EG/EGM/B/EN/A/ENT
D6101	B3AAB0000129	LED	
S6101	VSS0348	POWER SWITCH	NV-GS4EG/EGM/B K0D113B00026
S6101	VSS0547	POWER SWITCH	NV-GS5EG/EGM/B/EN/A/ENT K0D113B00027

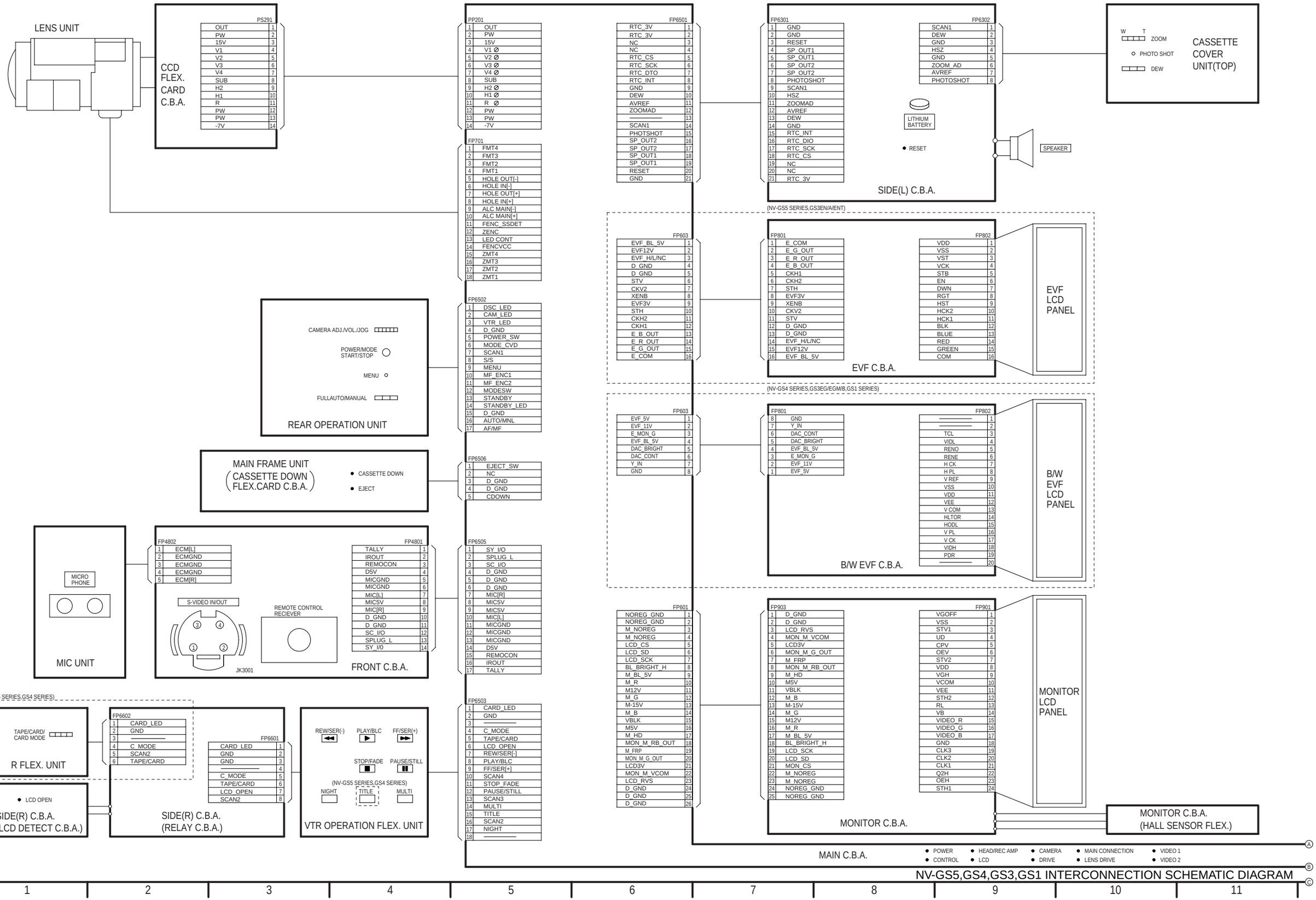
Ref. No.	Part No.	Part Name & Description	Remarks
■	VEP26274B	MONITOR C.B.A.	(RTL)
C902	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C903	ECST0JY106ZR	T.CAPACITOR CH 6.3V 10U	ECST0JY106R
C906	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	
C907	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C908	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C909	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C910	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C911	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	
C913	ECUX1E471KBQ	C.CAPACITOR CH 25V 470P	
C916	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C917	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C918	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C921	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C927	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C929	ECUX1E152KBQ	C.CAPACITOR CH 25V 1500P	
C931	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	F1J1A1050002
C932	ECUM1E105KBM	C.CAPACITOR CH 25V 1U	
C934	ECUV1C105KBN	C.CAPACITOR CH 16V 1U	F1J1C105A091
C935	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C937	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C938	ECUX1H101JCQ	C.CAPACITOR CH 50V 100P	
C939	ECUX1H331GCV	C.CAPACITOR CH 50V 330P	
C940	ECUX1H560JCQ	C.CAPACITOR CH 50V 56P	
C941	ECUX1H100CCQ	C.CAPACITOR CH 50V 10P	
C942	ECUX1C474KBN	C.CAPACITOR CH 16V 0.47U	ECJ2YB1C474K
C943	ECUX1A224KBV	C.CAPACITOR CH 10V 0.22U	
C944	ECUX1A224KBV	C.CAPACITOR CH 10V 0.22U	
C945	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C946	ECUM1C106VB	C.CAPACITOR CH 16V 10U	
C947	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C948	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C950	ECUV1C105KBN	C.CAPACITOR CH 16V 1U	F1J1C105A091
C952	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C953	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
D903	MA132WA	DIODE	MA3S132D
D904	MA159A	DIODE	MA4X159A
D905	HN2D01FUR	SWITCHING DIODE	B0ADDJ000011
D906	MA111	DIODE	MA2J111

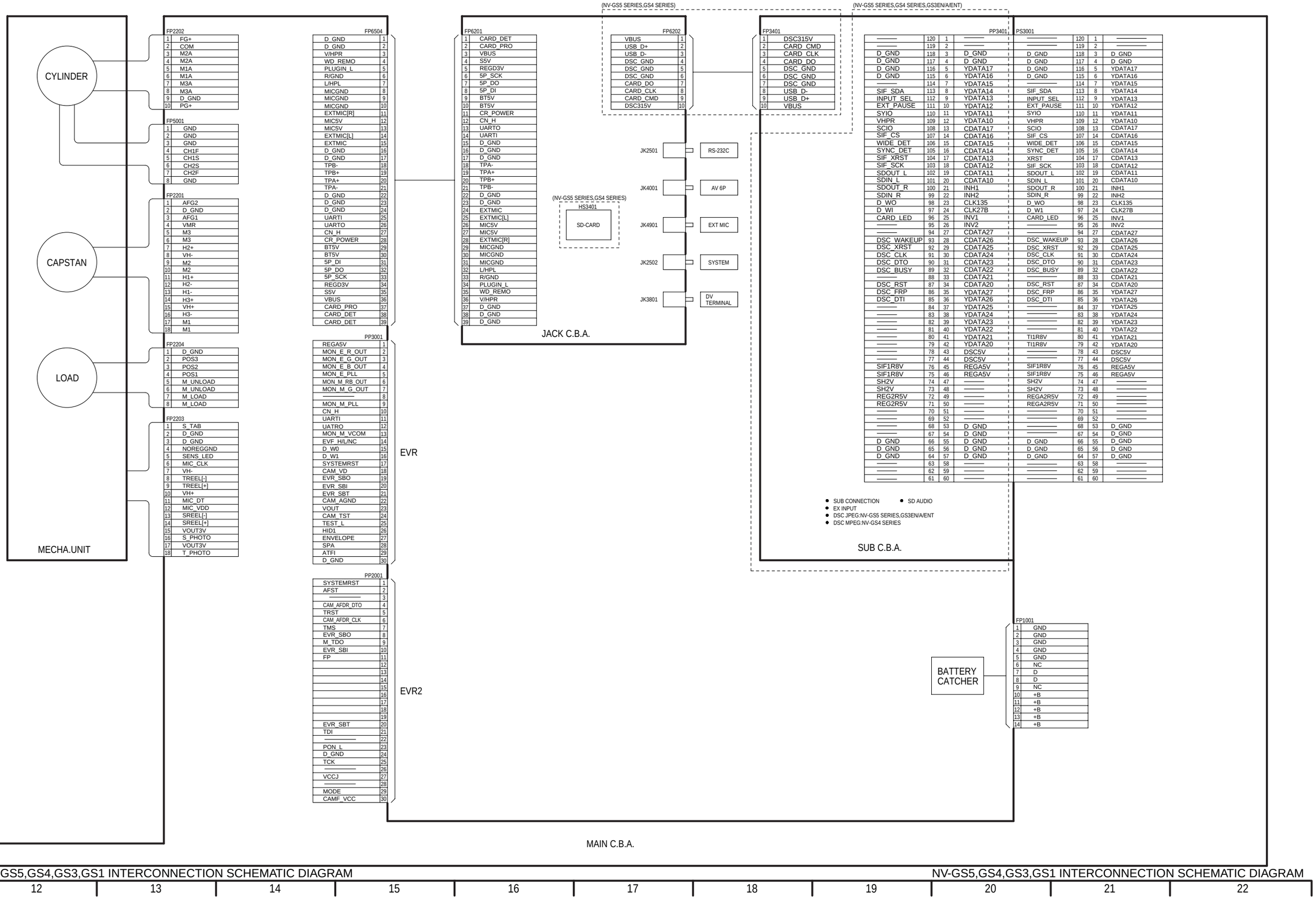
Ref. No.	Part No.	Part Name & Description	Remarks
FP901	VJS3320B024	CONNECTOR (FEMALE) 24P	K1MN24B00036
FP903	K1MN25B00045	CONNECTOR	
IC901	AN2540FHQ-V	IC	
IC902	TC4W53FU	IC	C0JBAR000226
IC903	C0CBCBC00029	IC	
IC908	SN74LV04APW	IC	C0JBAB000247
IC991	DN8797MS	HALL IC	
L901	VLQ0807K100	COIL 10UH	G1C100K00024
Q901	HN1C01FUYR	TRANSISTOR	B1HBCFA00001
Q902	2SK2159	TRANSISTOR	
Q903	B1HFCFA00015	TRANSISTOR ARRAY	
Q905	B1HFCFA00015	TRANSISTOR ARRAY	
QR901	UN9210	TRANSISTOR-RESISTOR	
QR902	UN9214J	TRANSISTOR-RESISTOR	
QR903	UN9214J	TRANSISTOR-RESISTOR	
QR904	UN9210	TRANSISTOR-RESISTOR	
R903	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R904	ERJ3RBD622	M.RESISTOR CH 1/16W 6.2K	
R908	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R909	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R910	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R912	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	D0GB334JA002
R914	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	ERJ3GEYJ104A
R915	ERJ3RBD333V	M.RESISTOR CH 1/16W 33K	
R917	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	
R918	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	
R921	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R924	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	
R925	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R926	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R927	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R928	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R929	ERJ3GEYJ220V	M.RESISTOR CH 1/16W 22	
R931	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R932	ERJ3RBD203V	M.RESISTOR CH 1/16W 20K	
R934	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	ERJ3GEYJ103A
R936	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	ERJ3GEYJ473A
R946	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R947	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R951	ERJ3GEYJ560V	M.RESISTOR CH 1/16W 56	
R952	ERJ3GEYJ472A	M.RESISTOR CH 1/16W 4.7K	
R953	ERJ3GEYJ823V	M.RESISTOR CH 1/16W 82K	D0GB823JA002

Ref. No.	Part No.	Part Name & Description	Remarks
R956	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	
R957	ERJ3RBD101	M.RESISTOR CH 1/16W 100	ERJ3RBD101V
R958	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	
R960	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R962	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	ERJ3GEYJ561A
R963	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	ERJ3GEYJ104A
R964	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R965	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	
R966	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	
R967	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	ERJ3GEYJ104A
R968	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R969	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R970	ERJ3GEYJ562V	M.RESISTOR CH 1/16W 5.6K	D0GB562JA002
R971	ERJ3GEYJ335V	M.RESISTOR CH 1/16W 3.3M	
R972	ERJ3GEYJ224V	M.RESISTOR CH 1/16W 220K	D0GB224JA002
R973	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	
R974	ERJ8GEYJ335	M.RESISTOR CH 1/8W 3.3M	
R975	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	
R976	ERJ3RBD621	M.RESISTOR CH 1/16W 620	
R977	ERJ3RED200	M.RESISTOR CH 1/16W 20	
R978	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	
R979	ERJ3GEYJ224V	M.RESISTOR CH 1/16W 220K	D0GB224JA002
R980	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	D0GB101JA002
R983	ERJ3GEYJ333V	M.RESISTOR CH 1/16W 33K	D0GB333JA002
R988	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R989	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	ERJ3GEYJ104A
T901	ETJ09K59AZ	CHIP TRANSFORMER	
T902	EFTU21R204	TRANSFORMER	
■	VEP28295A	B/W EVF C.B.A.	(RTL)NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
■	VEP28293A	EVF C.B.A.	(RTL)NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
C801	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C802	ECUV1A335KBN	C.CAPACITOR CH 10V 3.3U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B F1J1A335A005
C803	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B

Ref. No.	Part No.	Part Name & Description	Remarks
C804	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C805	ECUX1E102KBQ	C.CAPACITOR CH 25V 1000P	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C806	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C808	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C810	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B ECJ1XB1C104K
C814	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C815	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C816	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C817	ECUX1C223KBQ	C.CAPACITOR CH 16V 0.022U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C818	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C819	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
C820	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B ECJ1XB1C104K
D801	B3AFB0000016	LED (WHITE)	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B B3AFB0000018
D801	B3AFB0000027	LED	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
D802	02DZ6.2YTPH3	DIODE	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B B0BC6R100014
D803	02DZ6.2YTPH3	DIODE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT B0BC6R100014
D804	MA133	DIODE	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT MA3S133
FP801	K1MN08A00023	CONNECTOR	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
FP801	VJS3931B016	CONNECTOR (FEMALE) 16P	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
FP802	VJS4365B020	CONNECTOR (FEMALE) 20P	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
FP802	K1MN16B00091	CONNECTOR	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
IC801	C0HBA0000070	IC	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
Q801	B1ABBE000002	TRANSISTOR	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
R801	ERJ6GEY0R00V	M.RESISTOR CH 1/10W 0	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B D0GBR00JA017
R801	ERJ3GEYJ472A	M.RESISTOR CH 1/16W 4.7K	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
R802	ERJ3GEYJ102A	M.RESISTOR CH 1/16W 1K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R803	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R804	ERJ3RBD333V	M.RESISTOR CH 1/16W 33K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R804	ERJ3RED820	M.RESISTOR CH 1/16W 82	NV-GS3EN/A/ENT,NV-GS5EG/EGM/B/EN/A/ENT
R805	ERJ3GEYJ112V	M.RESISTOR CH 1/16W 1.1K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R806	ERJ2GE0R00	M.RESISTOR CH 1/16W 0	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R807	ERJ3GEYJ122V	M.RESISTOR CH 1/16W 1.2K	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
R810	ERJ3GEYJ121V	M.RESISTOR CH 1/16W 120	NV-GS1EG/EGM/B,NV-GS3EG/EGM/B,NV-GS4EG/EGM/B
■	VEP04804A	FRONT C.B.A.	(RTL)
C491	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C492	ECUX0J474KBV	C.CAPACITOR CH 6.3V 0.47U	
C4801	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4802	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4803	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C4804	ECUX1E332KBQ	C.CAPACITOR CH 25V 3300P	
C4805	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4806	ECUX1C103KBQ	C.CAPACITOR CH 16V 0.01U	
C4807	ECUV0J475KBN	C.CAPACITOR CH 6.3V 4.7U	F1J0J4750004
C4808	F3F0J4760002	TANTALUM CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C4811	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C4812	ECUX0J105KBV	C.CAPACITOR CH 6.3V 1U	
C6401	ECUX1A104KBQ	C.CAPACITOR CH 10V 0.1U	
C6402	ECST0JY226ZR	T.CAPACITOR CH 6.3V 22U	F3F0J226A007
D491	MA132WA	DIODE	MA3S132D
D6801	B3AAB0000129	LED	
D6802	PH310	DIODE	B3GA00000001
FP4801	VJS4322A014	CONNECTOR (FEMALE) 14P	
FP4802	VJS3320D005	CONNECTOR (FEMALE) 5P	K1MN05B00028
IC4801	NJM2115VA	IC	C0ABBB000106
IR6401	PNA4618M05VT	REMOCON	
JK3001	K2HZ104D0001	S-JACK	
LB3961	VLP0329A121	CHIP BEAD	
LB3963	VLP0329A121	CHIP BEAD	
Q491	2SD1030	TRANSISTOR	
Q492	2SD1819A-R	TRANSISTOR	2SD1819AR
Q4803	2SD1819A	TRANSISTOR	2SD1819AW
R491	ERJ2GEJ225X	M.RESISTOR CH 1/16W 2.2M	ERJ2RMJ225X
R492	ERJ2GEJ334X	M.RESISTOR CH 1/16W 330K	ERJ2RMJ334X
R493	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R494	ERJ2GEJ182	M.RESISTOR CH 1/16W 1.8K	ERJ2GEJ182X
R495	ERJ3GEYJ106V	M.RESISTOR CH 1/16W 10M	
R3960	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R3961	ERJ2GEJ102	M.RESISTOR CH 1/16W 1K	
R4801	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R4802	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	
R4803	ERJ2GEJ683X	M.RESISTOR CH 1/16W 68K	ERJ2RMJ683X
R4804	ERJ2GEJ683X	M.RESISTOR CH 1/16W 68K	ERJ2RMJ683X
R4805	ERJ2GEJ394X	M.RESISTOR CH 1/16W 390K	ERJ2RMJ394X
R4806	ERJ2GEJ394X	M.RESISTOR CH 1/16W 390K	ERJ2RMJ394X
R4813	ERJ2GEJ223	M.RESISTOR CH 1/16W 22K	
R4814	ERJ2GEJ333X	M.RESISTOR CH 1/16W 33K	ERJ2RMJ333X
R4815	ERJ2GEJ472X	M.RESISTOR CH 1/16W 4.7K	ERJ2RMJ472X
R6401	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R6402	ERJ3GEYJ470V	M.RESISTOR CH 1/16W 47	
R6403	ERJ3GEY0R00A	M.RESISTOR CH 1/16W 0	
R6803	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	
VZ3952	D4ED1120A002	TRANSIENT/SURGE ABSORBER	
VZ6401	D4ED1270A008	TRANSIENT/SURGE ABSORBER	
VZ6402	D4ED1270A008	TRANSIENT/SURGE ABSORBER	

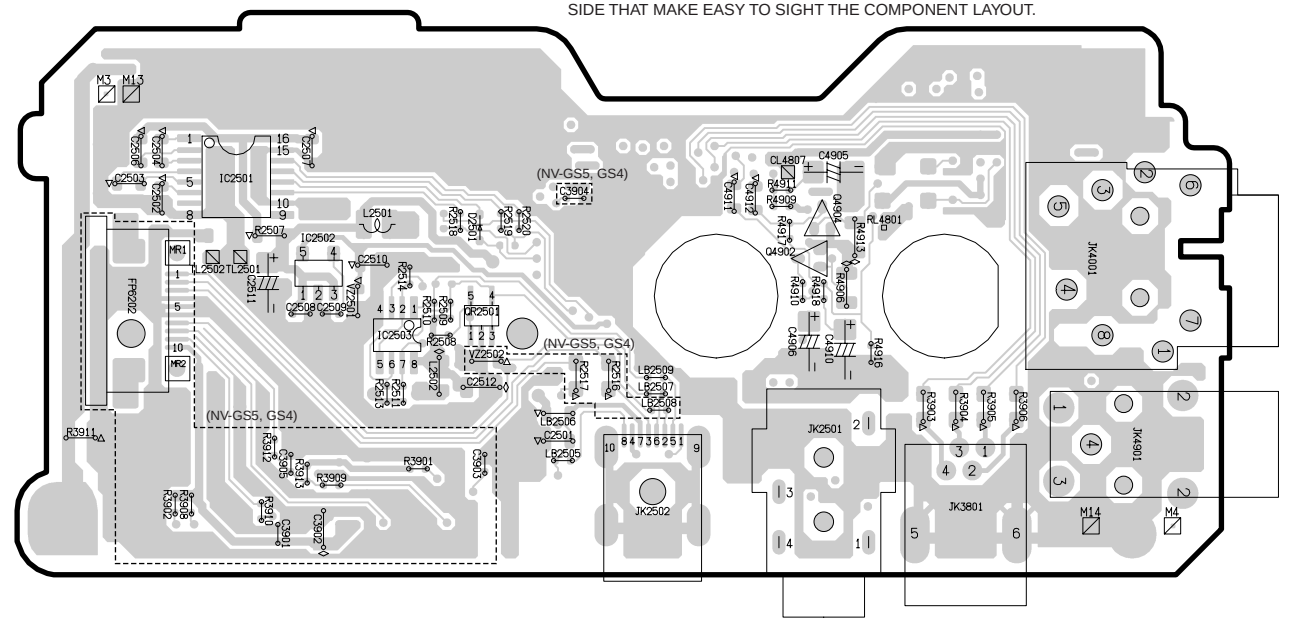

LENS UNIT
CCD FLEX. CARD C.B.A.
PS291
OUT 1
PW 2
15V 3
V1 4
V2 5
V3 6
V4 7
SUB 8
H2 9
H1 10
R 11
PW 12
PW 13
-7V 14
PP201
OUT 1
PW 2
15V 3
V1 ⊘ 4
V2 ⊘ 5
V3 ⊘ 6
V4 ⊘ 7
SUB 8
H2 ⊘ 9
H1 ⊘ 10
R ⊘ 11
PW 12
PW 13
-7V 14
FP701
FMT4 1
FMT3 2
FMT2 3
FMT1 4
HOLE OUT[-] 5
HOLE IN[-] 6
HOLE OUT[+] 7
HOLE IN[+] 8
ALC MAIN[-] 9
ALC MAIN[+] 10
FENC_SSDET 11
ZENC 12
LED CONT 13
FENCVCC 14
ZMT4 15
ZMT3 16
ZMT2 17
ZMT1 18
FP6501
RTC_3V 1
RTC_3V 2
NC 3
NC 4
RTC_CS 5
RTC_SCK 6
RTC_DTO 7
RTC_INT 8
GND 9
DEW 10
AVREF 11
ZOOMAD 12
13
SCAN1 14
PHOTSHOT 15
SP_OUT2 16
SP_OUT2 17
SP_OUT1 18
SP_OUT1 19
RESET 20
GND 21
FP6301
GND 1
GND 2
RESET 3
SP_OUT1 4
SP_OUT1 5
SP_OUT2 6
SP_OUT2 7
PHOTOSHOT 8
SCAN1 9
HSZ 10
ZOOMAD 11
AVREF 12
DEW 13
GND 14
RTC_INT 15
RTC_DIO 16
RTC_SCK 17
RTC_CS 18
NC 19
NC 20
RTC_3V 21
FP6302
SCAN1 1
DEW 2
GND 3
HSZ 4
GND 5
ZOOM_AD 6
AVREF 7
PHOTOSHOT 8
LITHIUM BATTERY
RESET
SPEAKER
SIDE(L) C.B.A.
W T
ZOOM
PHOTO SHOT
DEW
CASSETTE COVER UNIT(TOP)
(NV-GS5 SERIES,GS3EN/A/ENT)
FP603
EVF_BL_5V 1
EVF12V 2
EVF_H/L/NC 3
D_GND 4
D_GND 5
STV 6
CKV2 7
XENB 8
EVF3V 9
STH 10
CKH2 11
CKH1 12
E_B_OUT 13
E_R_OUT 14
E_G_OUT 15
E_COM 16
FP801
E_COM 1
E_G_OUT 2
E_R_OUT 3
E_B_OUT 4
CKH1 5
CKH2 6
STH 7
EVF3V 8
XENB 9
CKV2 10
STV 11
D_GND 12
D_GND 13
EVF_H/L/NC 14
EVF12V 15
EVF_BL_5V 16
FP802
VDD 1
VSS 2
VST 3
VCK 4
STB 5
EN 6
DWN 7
RGT 8
HST 9
HCK2 10
HCK1 11
BLK 12
BLUE 13
RED 14
GREEN 15
COM 16
EVF C.B.A.
EVF LCD PANEL
(NV-GS4 SERIES,GS3EG/EGM/B,GS1 SERIES)
FP603
EVF_5V 1
EVF_11V 2
E_MON_G 3
EVF_BL_5V 4
DAC_BRIGHT 5
DAC_CONT 6
Y_IN 7
GND 8
FP801
GND 8
Y_IN 7
DAC_CONT 6
DAC_BRIGHT 5
EVF_BL_5V 4
E_MON_G 3
EVF_11V 2
EVF_5V 1
FP802
1
2
TCL 3
VIDL 4
RENO 5
RENE 6
H CK 7
H PL 8
V REF 9
VSS 10
VDD 11
VEE 12
V COM 13
HLTOR 14
HODL 15
V PL 16
V CK 17
VIDH 18
PDR 19
20
B/W EVF C.B.A.
B/W EVF LCD PANEL
CAMERA ADJ./VOL./JOG
POWER/MODE START/STOP
MENU
FULLAUTO/MANUAL
REAR OPERATION UNIT
FP6502
DSC_LED 1
CAM_LED 2
VTR_LED 3
D_GND 4
POWER_SW 5
MODE_CVD 6
SCAN1 7
S/S 8
MENU 9
MF_ENC1 10
MF_ENC2 11
MODESW 12
STANDBY 13
STANDBY_LED 14
D_GND 15
AUTO/MNL 16
AF/MF 17
MAIN FRAME UNIT
CASSETTE DOWN FLEX.CARD C.B.A.
CASSETTE DOWN
EJECT
FP6506
EJECT_SW 1
NC 2
D_GND 3
D_GND 4
CDOWN 5
MICRO PHONE
MIC UNIT
FP4802
ECM[L] 1
ECMGND 2
ECMGND 3
ECMGND 4
ECM[R] 5
S-VIDEO IN/OUT
JK3001
REMOTE CONTROL RECIEVER
FP4801
TALLY 1
IROUT 2
REMOCON 3
D5V 4
MICGND 5
MICGND 6
MIC[L] 7
MIC5V 8
MIC[R] 9
D_GND 10
D_GND 11
SC_I/O 12
SPLUG_L 13
SY_I/0 14
FRONT C.B.A.
FP6505
SY_I/O 1
SPLUG_L 2
SC_I/O 3
D_GND 4
D_GND 5
D_GND 6
MIC[R] 7
MIC5V 8
MIC5V 9
MIC[L] 10
MICGND 11
MICGND 12
MICGND 13
D5V 14
REMOCON 15
IROUT 16
TALLY 17
(NV-GS5 SERIES,GS4 SERIES)
TAPE/CARD/ CARD MODE
R FLEX. UNIT
FP6602
CARD_LED 1
GND 2
3
C_MODE 4
SCAN2 5
TAPE/CARD 6
FP6601
CARD_LED 1
GND 2
GND 3
4
C_MODE 5
TAPE/CARD 6
LCD_OPEN 7
SCAN2 8
LCD OPEN
SIDE(R) C.B.A. (LCD DETECT C.B.A.)
SIDE(R) C.B.A. (RELAY C.B.A.)
REW/SER(-)
PLAY/BLC
FF/SER(+)
STOP/FADE
PAUSE/STILL
(NV-GS5 SERIES,GS4 SERIES)
NIGHT
TITLE
MULTI
VTR OPERATION FLEX. UNIT
FP6503
CARD_LED 1
GND 2
3
C_MODE 4
TAPE/CARD 5
LCD_OPEN 6
REW/SER[-] 7
PLAY/BLC 8
FF/SER[+] 9
SCAN4 10
STOP_FADE 11
PAUSE/STILL 12
SCAN3 13
MULTI 14
TITLE 15
SCAN2 16
NIGHT 17
18
FP601
NOREG_GND 1
NOREG_GND 2
M_NOREG 3
M_NOREG 4
LCD_CS 5
LCD_SD 6
LCD_SCK 7
BL_BRIGHT_H 8
M_BL_5V 9
M_R 10
M12V 11
M_G 12
M-15V 13
M_B 14
VBLK 15
M_HD 16
M5V 17
MON_M_RB_OUT 18
M_FRP 19
MON_M_G_OUT 20
LCD3V 21
MON_M_VCOM 22
LCD_RVS 23
D_GND 24
D_GND 25
D_GND 26
FP903
D_GND 1
D_GND 2
LCD_RVS 3
MON_M_VCOM 4
LCD3V 5
MON_M_G_OUT 6
M_FRP 7
MON_M_RB_OUT 8
M_HD 9
M5V 10
VBLK 11
M_B 12
M-15V 13
M_G 14
M12V 15
M_R 16
M_BL_5V 17
BL_BRIGHT_H 18
LCD_SCK 19
LCD_SD 20
MON_CS 21
M_NOREG 22
M_NOREG 23
NOREG_GND 24
NOREG_GND 25
FP901
VGOFF 1
VSS 2
STV1 3
UD 4
CPV 5
OEV 6
STV2 7
VDD 8
VGH 9
VCOM 10
VEE 11
STH2 12
RL 13
VB 14
VIDEO_R 15
VIDEO_G 16
VIDEO_B 17
GND 18
CLK3 19
CLK2 20
CLK1 21
Q2H 22
OEH 23
STH1 24
MONITOR LCD PANEL
MONITOR C.B.A.
MONITOR C.B.A. (HALL SENSOR FLEX.)
MAIN C.B.A.
POWER
CONTROL
HEAD/REC AMP
LCD
CAMERA
DRIVE
MAIN CONNECTION
LENS DRIVE
VIDEO 1
VIDEO 2
NV-GS5,GS4,GS3,GS1 INTERCONNECTION SCHEMATIC DIAGRAM
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11


CYLINDER
CAPSTAN
LOAD
MECHA.UNIT
FP2202
1 FG+
2 COM
3 M2A
4 M2A
5 M1A
6 M1A
7 M3A
8 M3A
9 D_GND
10 PG+
FP5001
1 GND
2 GND
3 GND
4 CH1F
5 CH1S
6 CH2S
7 CH2F
8 GND
FP2201
1 AFG2
2 D_GND
3 AFG1
4 VMR
5 M3
6 M3
7 H2+
8 VH-
9 M2
10 M2
11 H1+
12 H2-
13 H1-
14 H3+
15 VH+
16 H3-
17 M1
18 M1
FP2204
1 D_GND
2 POS3
3 POS2
4 POS1
5 M_UNLOAD
6 M_UNLOAD
7 M_LOAD
8 M_LOAD
FP2203
1 S_TAB
2 D_GND
3 D_GND
4 NOREGGND
5 SENS_LED
6 MIC_CLK
7 VH-
8 TREEL[-]
9 TREEL[+]
10 VH+
11 MIC_DT
12 MIC_VDD
13 SREEL[-]
14 SREEL[+]
15 VOUT3V
16 S_PHOTO
17 VOUT3V
18 T_PHOTO
FP6504
1 D_GND
2 D_GND
3 V/HPR
4 WD_REMO
5 PLUGIN_L
6 R/GND
7 L/HPL
8 MICGND
9 MICGND
10 MICGND
11 EXTMIC[R]
12 MIC5V
13 MIC5V
14 EXTMIC[L]
15 EXTMIC
16 D_GND
17 D_GND
18 TPB-
19 TPB+
20 TPA+
21 TPA-
22 D_GND
23 D_GND
24 D_GND
25 UARTI
26 UARTO
27 CN_H
28 CR_POWER
29 BT5V
30 BT5V
31 5P_DI
32 5P_DO
33 5P_SCK
34 REGD3V
35 S5V
36 VBUS
37 CARD_PRO
38 CARD_DET
39 CARD_DET
PP3001
1 REGA5V
2 MON_E_R_OUT
3 MON_E_G_OUT
4 MON_E_B_OUT
5 MON_E_PLL
6 MON_M_RB_OUT
7 MON_M_G_OUT
8 ———
9 MON_M_PLL
10 CN_H
11 UARTI
12 UATRO
13 MON_M_VCOM
14 EVF_H/L/NC
15 D_W0
16 D_W1
17 SYSTEMRST
18 CAM_VD
19 EVR_SBO
20 EVR_SBI
21 EVR_SBT
22 CAM_AGND
23 VOUT
24 CAM_TST
25 TEST_L
26 HID1
27 ENVELOPE
28 SPA
29 ATFI
30 D_GND
EVR
PP2001
1 SYSTEMRST
2 AFST
3 ———
4 CAM_AFDR_DTO
5 TRST
6 CAM_AFDR_CLK
7 TMS
8 EVR_SBO
9 M_TDO
10 EVR_SBI
11 FP
12
13
14
15
16
17
18
19
20 EVR_SBT
21 TDI
22 ———
23 PON_L
24 D_GND
25 TCK
26 ———
27 VCCJ
28 ———
29 MODE
30 CAMF_VCC
EVR2
(NV-GS5 SERIES,GS4 SERIES)
FP6201
1 CARD_DET
2 CARD_PRO
3 VBUS
4 S5V
5 REGD3V
6 5P_SCK
7 5P_DO
8 5P_DI
9 BT5V
10 BT5V
11 CR_POWER
12 CN_H
13 UARTO
14 UARTI
15 D_GND
16 D_GND
17 D_GND
18 TPA-
19 TPA+
20 TPB+
21 TPB-
22 D_GND
23 D_GND
24 EXTMIC
25 EXTMIC[L]
26 MIC5V
27 MIC5V
28 EXTMIC[R]
29 MICGND
30 MICGND
31 MICGND
32 L/HPL
33 R/GND
34 PLUGIN_L
35 WD_REMO
36 V/HPR
37 D_GND
38 D_GND
39 D_GND
JACK C.B.A.
(NV-GS5 SERIES,GS4 SERIES)
FP6202
1 VBUS
2 USB_D+
3 USB_D-
4 DSC_GND
5 DSC_GND
6 DSC_GND
7 CARD_DO
8 CARD_CLK
9 CARD_CMD
10 DSC315V
(NV-GS5 SERIES,GS4 SERIES)
HS3401
SD-CARD
JK2501
RS-232C
JK4001
AV 6P
JK4901
EXT MIC
JK2502
SYSTEM
JK3801
DV TERMINAL
(NV-GS5 SERIES,GS4 SERIES,GS3ENA/ENT)
FP3401
1 DSC315V
2 CARD_CMD
3 CARD_CLK
4 CARD_DO
5 DSC_GND
6 DSC_GND
7 DSC_GND
8 USB_D-
9 USB_D+
10 VBUS
PP3401 / PS3001
———— 120 1 ———— ———— 120 1 ————
———— 119 2 ———— ———— 119 2 ————
D_GND 118 3 D_GND D_GND 118 3 D_GND
D_GND 117 4 D_GND D_GND 117 4 D_GND
D_GND 116 5 YDATA17 D_GND 116 5 YDATA17
D_GND 115 6 YDATA16 D_GND 115 6 YDATA16
———— 114 7 YDATA15 ———— 114 7 YDATA15
SIF_SDA 113 8 YDATA14 SIF_SDA 113 8 YDATA14
INPUT_SEL 112 9 YDATA13 INPUT_SEL 112 9 YDATA13
EXT_PAUSE 111 10 YDATA12 EXT_PAUSE 111 10 YDATA12
SYIO 110 11 YDATA11 SYIO 110 11 YDATA11
VHPR 109 12 YDATA10 VHPR 109 12 YDATA10
SCIO 108 13 CDATA17 SCIO 108 13 CDATA17
SIF_CS 107 14 CDATA16 SIF_CS 107 14 CDATA16
WIDE_DET 106 15 CDATA15 WIDE_DET 106 15 CDATA15
SYNC_DET 105 16 CDATA14 SYNC_DET 105 16 CDATA14
SIF_XRST 104 17 CDATA13 XRST 104 17 CDATA13
SIF_SCK 103 18 CDATA12 SIF_SCK 103 18 CDATA12
SDOUT_L 102 19 CDATA11 SDOUT_L 102 19 CDATA11
SDIN_L 101 20 CDATA10 SDIN_L 101 20 CDATA10
SDOUT_R 100 21 INH1 SDOUT_R 100 21 INH1
SDIN_R 99 22 INH2 SDIN_R 99 22 INH2
D_WO 98 23 CLK135 D_WO 98 23 CLK135
D_WI 97 24 CLK27B D_W1 97 24 CLK27B
CARD_LED 96 25 INV1 CARD_LED 96 25 INV1
———— 95 26 INV2 ———— 95 26 INV2
———— 94 27 CDATA27 ———— 94 27 CDATA27
DSC_WAKEUP 93 28 CDATA26 DSC_WAKEUP 93 28 CDATA26
DSC_XRST 92 29 CDATA25 DSC_XRST 92 29 CDATA25
DSC_CLK 91 30 CDATA24 DSC_CLK 91 30 CDATA24
DSC_DTO 90 31 CDATA23 DSC_DTO 90 31 CDATA23
DSC_BUSY 89 32 CDATA22 DSC_BUSY 89 32 CDATA22
———— 88 33 CDATA21 ———— 88 33 CDATA21
DSC_RST 87 34 CDATA20 DSC_RST 87 34 CDATA20
DSC_FRP 86 35 YDATA27 DSC_FRP 86 35 YDATA27
DSC_DTI 85 36 YDATA26 DSC_DTI 85 36 YDATA26
———— 84 37 YDATA25 ———— 84 37 YDATA25
———— 83 38 YDATA24 ———— 83 38 YDATA24
———— 82 39 YDATA23 ———— 82 39 YDATA23
———— 81 40 YDATA22 ———— 81 40 YDATA22
———— 80 41 YDATA21 TI1R8V 80 41 YDATA21
———— 79 42 YDATA20 TI1R8V 79 42 YDATA20
———— 78 43 DSC5V ———— 78 43 DSC5V
———— 77 44 DSC5V ———— 77 44 DSC5V
SIF1R8V 76 45 REGA5V SIF1R8V 76 45 REGA5V
SIF1R8V 75 46 REGA5V SIF1R8V 75 46 REGA5V
SH2V 74 47 ———— SH2V 74 47 ————
SH2V 73 48 ———— SH2V 73 48 ————
REG2R5V 72 49 ———— REGA2R5V 72 49 ————
REG2R5V 71 50 ———— REGA2R5V 71 50 ————
———— 70 51 ———— ———— 70 51 ————
———— 69 52 ———— ———— 69 52 ————
———— 68 53 D_GND ———— 68 53 D_GND
———— 67 54 D_GND ———— 67 54 D_GND
D_GND 66 55 D_GND D_GND 66 55 D_GND
D_GND 65 56 D_GND D_GND 65 56 D_GND
D_GND 64 57 D_GND D_GND 64 57 D_GND
———— 63 58 ———— ———— 63 58 ————
———— 62 59 ———— ———— 62 59 ————
———— 61 60 ———— ———— 61 60 ————
SUB CONNECTION
EX INPUT
DSC JPEG:NV-GS5 SERIES,GS3EN/A/ENT
DSC MPEG:NV-GS4 SERIES
SD AUDIO
SUB C.B.A.
BATTERY CATCHER
FP1001
1 GND
2 GND
3 GND
4 GND
5 GND
6 NC
7 D
8 D
9 NC
10 +B
11 +B
12 +B
13 +B
14 +B
MAIN C.B.A.

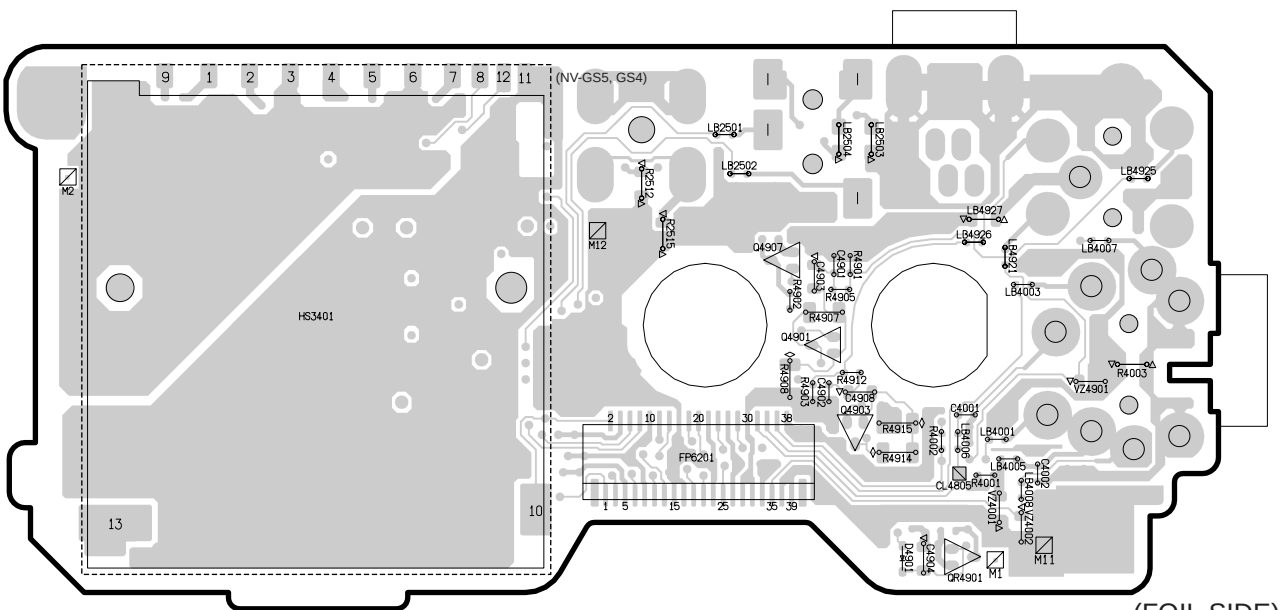
(VEP04805B: NV-GS5 SERIES, GS4 SERIES)
(VEP04805C: NV-GS3 SERIES, GS1 SERIES)

NOTE:MULTILAYER C.B.A.

THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.



(COMPONENT SIDE)

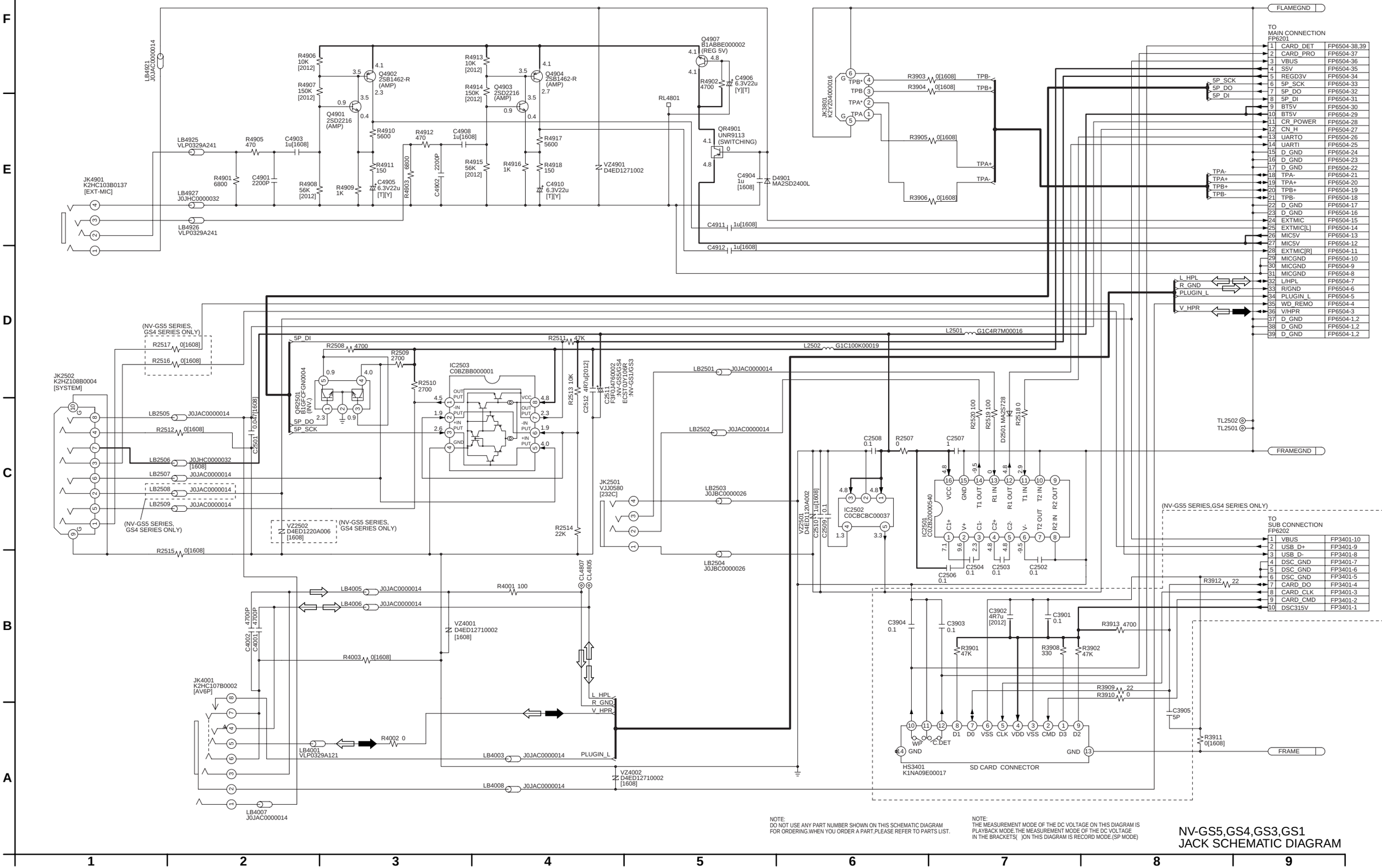


(FOIL SIDE)

NV-GS5,GS4,GS3,GS1
JACK C.B.A.

(JACK C.B.A.)

:VIDEO MAIN SIGNAL PATH
:AUDIO MAIN SIGNAL PATH

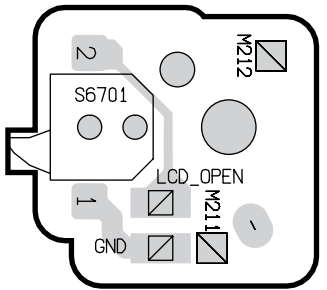


NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

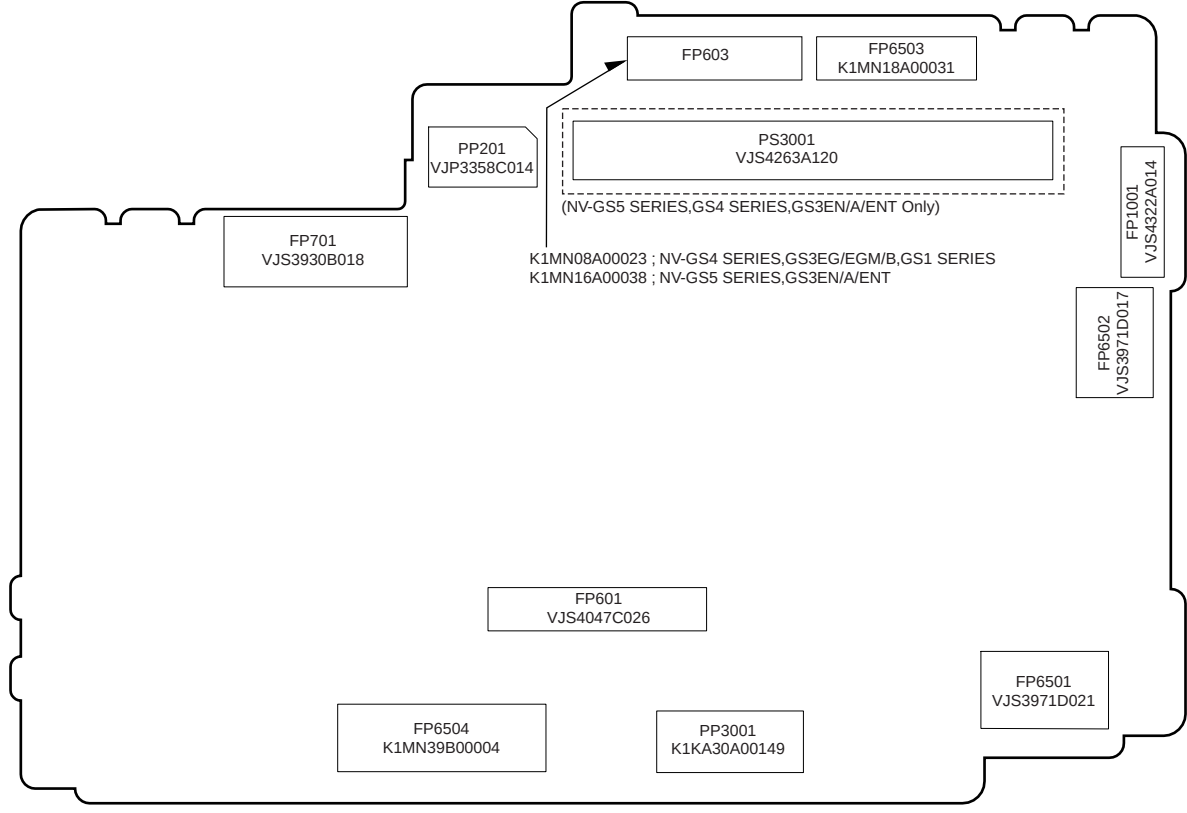
NV-GS5,GS4,GS3,GS1 JACK SCHEMATIC DIAGRAM

(VEK9631: NV-GS5 SERIES, GS4 SERIES)
(VEK9632: NV-GS3 SERIES, GS1 SERIES)

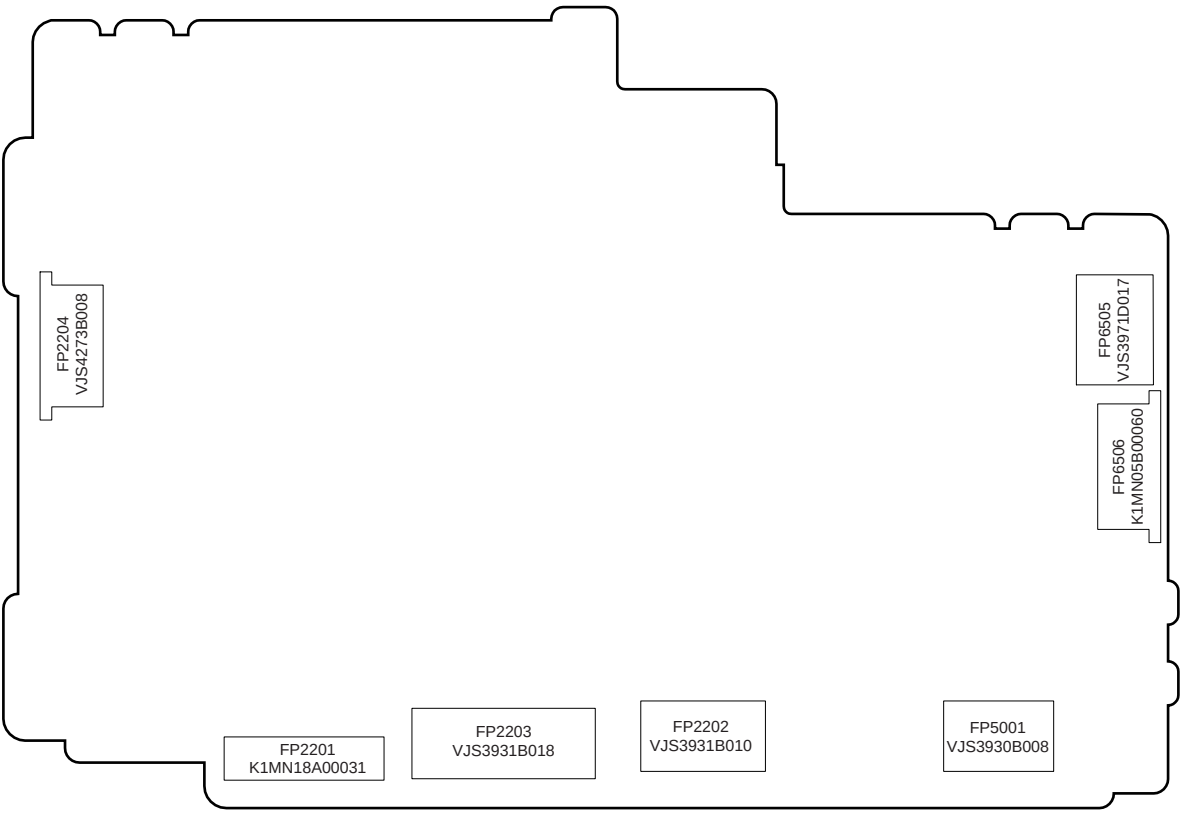


NV-GS5,GS4,GS3,GS1
SIDE (R) C.B.A. (LCD DETECT C.B.A.)

B
A
1
2



(COMPONENT SIDE)



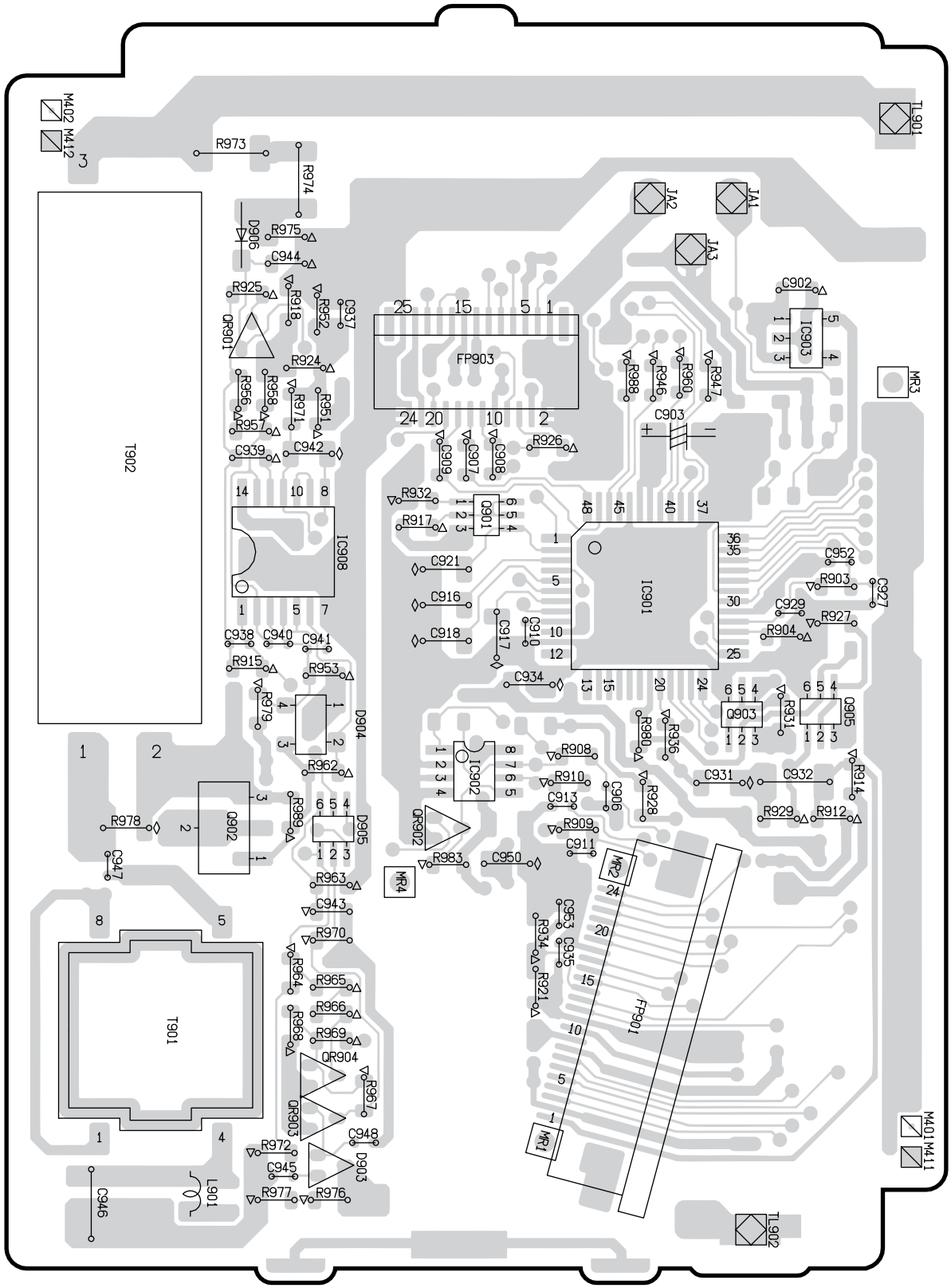
(FOIL SIDE)

Monitor C.B.A.

Integrated Circuit		C911	C-3	R924	E-2	R988	E-3
IC901	D-3	C913	C-3	R925	E-2	R989	C-2
IC902	C-3	C916	D-3	R926	D-3		
IC903	E-4	C917	D-3	R927	D-4		
IC908	D-2	C918	D-3	R928	C-3		
Transistor		C921	D-3	R929	C-4		
Q901	D-3	C927	D-4	R931	C-4		
Q902	C-2	C929	D-4	R932	D-2		
Q903	C-4	C931	C-4	R934	B-3		
Q905	C-4	C932	C-4	R936	C-4		
Transistor & Resistor		C934	C-3	R946	E-3		
QR901	E-2	C935	B-3	R947	E-4		
QR902	C-3	C937	E-2	R951	D-2		
QR903	B-2	C938	D-2	R952	E-2		
QR904	B-2	C939	D-2	R953	C-2		
Test Point		C940	D-2	R956	E-2		
TL901	F-4	C941	C-2	R957	D-2		
TL902	A-4	C942	D-2	R958	E-2		
Connector		C943	B-2	R960	E-4		
FP901	B-3	C944	E-2	R962	C-2		
FP903	E-3	C945	A-2	R963	C-2		
Diode		C946	A-1	R964	B-2		
D903	A-2	C947	C-1	R965	B-2		
D904	C-2	C948	A-2	R966	B-2		
D905	C-2	C950	C-3	R967	B-2		
D906	E-2	C952	D-4	R968	B-2		
Transformer		C953	B-3	R969	B-2		
T901	B-1	**Resistor**		R970	B-2		
T902	D-1	R903	D-4	R971	D-2		
Coil		R904	D-4	R972	A-2		
L901	A-2	R908	C-3	R973	F-2		
Capacitor		R909	C-3	R974	E-2		
C902	E-4	R910	C-3	R975	E-2		
C903	D-4	R912	C-4	R976	A-2		
C906	C-3	R914	C-4	R977	A-2		
C907	D-3	R915	C-2	R978	C-1		
C908	D-3	R917	D-2	R979	C-2		
C909	D-3	R918	E-2	R980	C-3		
C910	D-3	R921	B-3	R983	C-3		

ADDRESS INFORMATION

(VEP26274B)



NV-GS5,GS4,GS3,GS1
MONITOR C.B.A.

(MONITOR C.B.A.)

:VIDEO MAIN SIGNAL PATH

TO MAIN CONNECTION FP903

FP601-1,2	NOREG_GND	25
FP601-1,2	NOREG_GND	24
FP601-3,4	M_NOREG	23
FP601-3,4	M_NOREG	22
FP601-5	MON_CS	21
FP601-6	LCD_SD	20
FP601-7	LCD_SCK	19
FP601-8	BL_BRIGHT_H	18
FP601-9	M_BL_5V	17
FP601-10	M_R	16
FP601-11	M12V	15
FP601-12	M_G	14
FP601-13	M-15V	13
FP601-14	M_B	12
FP601-15	VBLK	11
FP601-16	M5V	10
FP601-17	M_HD	9
FP601-18	MON_M_RB_OUT	8
FP601-19	M_FRP	7
FP601-20	MON_M_G_OUT	6
FP601-21	LCD3V	5
FP601-22	MON_M_VCOM	4
FP601-23	LCD_RVS	3
FP601-24,25,26	D_GND	2
FP601-24,25,26	D_GND	1

IC991
DN8797MS
(LCD FORWARD/REVERS)

HALL SENSOR FLEX.CARD

IC903
C0CBCBC0029
(REG. 3V)

IC901
AN2540FHQ-V
(LCD DRIVE)

TO
MONITOR LCD PANEL
FP901

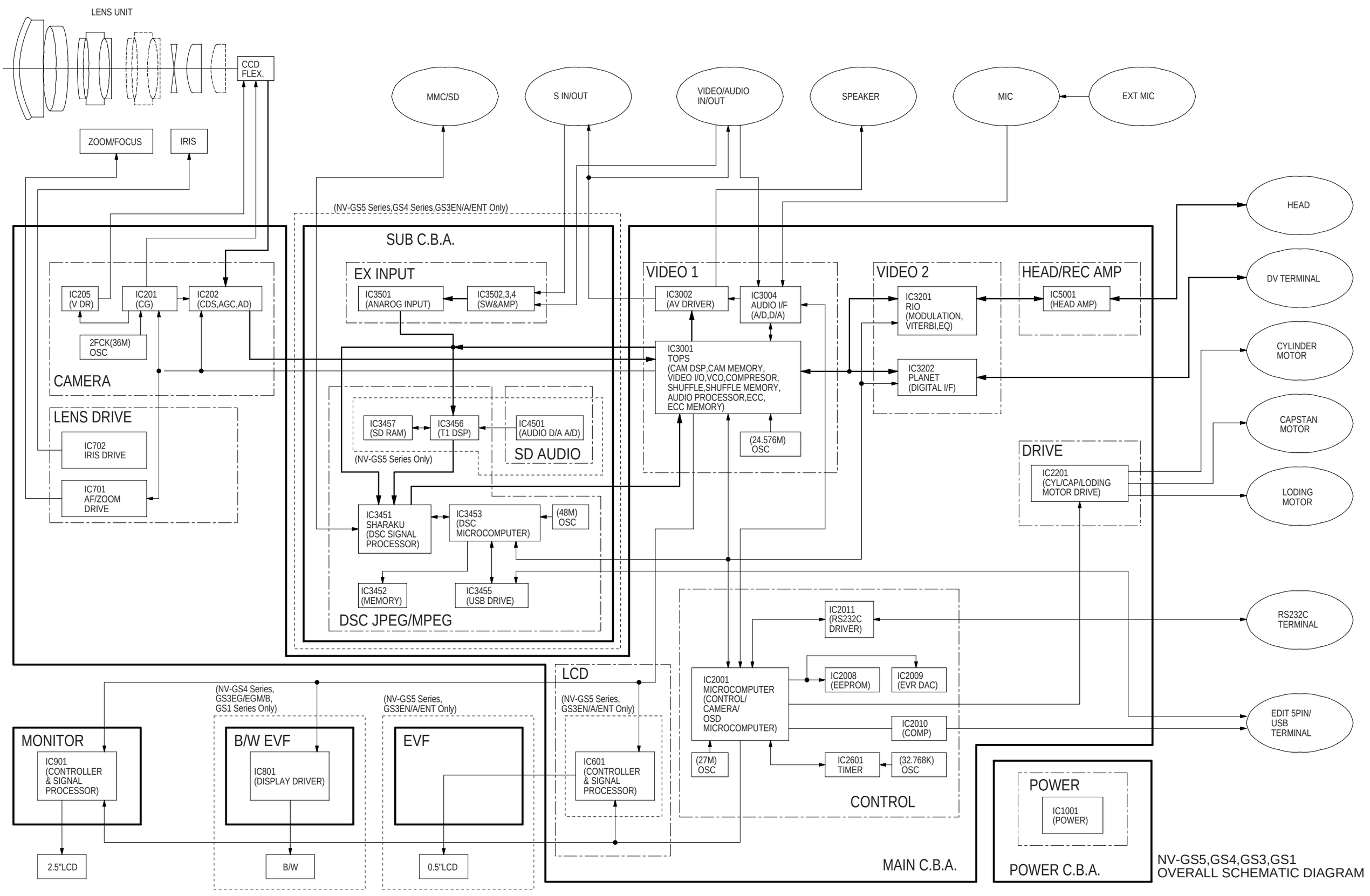
24	STH1	
23	OEH	
22	Q2H	
21	CLK1	
20	CLK2	
19	CLK3	
18	GND	
17	VIDEO_B	
16	VIDEO_G	
15	VIDEO_R	
14	VB	
13	RL	
12	STH2	
11	VEE	
10	VCOM	
9	VGH	
8	VDD	
7	STV2	
6	OEV	
5	CPV	
4	UD	
3	STV1	
2	VSS	
1	VGOFF	

TO BACKLIGHT

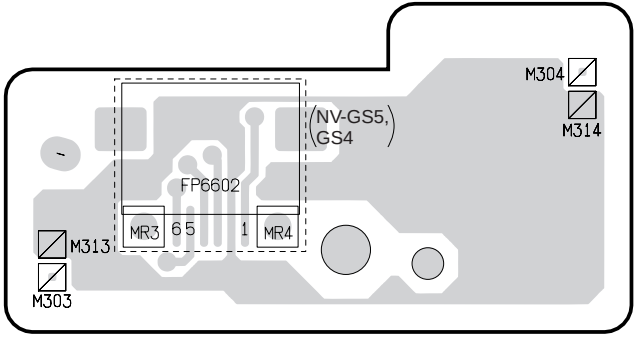
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.(MONITOR:ON)

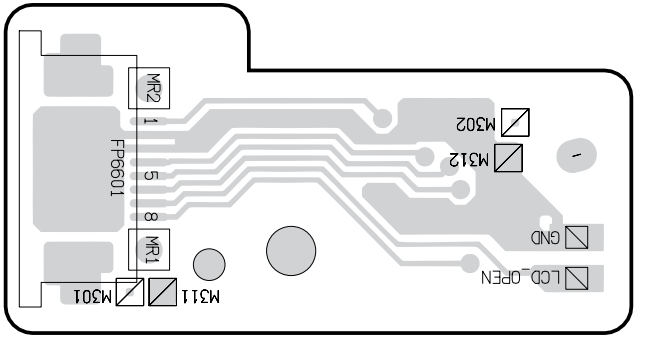
NV-GS5,GS4,GS3,GS1
MONITOR SCHEMATIC DIAGRAM


LENS UNIT
CCD FLEX.
ZOOM/FOCUS
IRIS
MMC/SD
S IN/OUT
VIDEO/AUDIO IN/OUT
SPEAKER
MIC
EXT MIC
HEAD
DV TERMINAL
CYLINDER MOTOR
CAPSTAN MOTOR
LODING MOTOR
RS232C TERMINAL
EDIT 5PIN/ USB TERMINAL
(NV-GS5 Series,GS4 Series,GS3EN/A/ENT Only)
SUB C.B.A.
CAMERA
IC205 (V DR)
IC201 (CG)
IC202 (CDS,AGC,AD)
2FCK(36M) OSC
EX INPUT
IC3501 (ANAROG INPUT)
IC3502,3,4 (SW&AMP)
VIDEO 1
IC3002 (AV DRIVER)
IC3004 AUDIO I/F (A/D,D/A)
IC3001 TOPS (CAM DSP,CAM MEMORY, VIDEO I/O,VCO,COMPRESOR, SHUFFLE,SHUFFLE MEMORY, AUDIO PROCESSOR,ECC, ECC MEMORY)
(24.576M) OSC
VIDEO 2
IC3201 RIO (MODULATION, VITERBI,EQ)
IC3202 PLANET (DIGITAL I/F)
HEAD/REC AMP
IC5001 (HEAD AMP)
LENS DRIVE
IC702 IRIS DRIVE
IC701 AF/ZOOM DRIVE
IC3457 (SD RAM)
IC3456 (T1 DSP)
IC4501 (AUDIO D/A A/D)
SD AUDIO
(NV-GS5 Series Only)
DRIVE
IC2201 (CYL/CAP/LODING MOTOR DRIVE)
IC3451 SHARAKU (DSC SIGNAL PROCESSOR)
IC3453 (DSC MICROCOMPUTER)
(48M) OSC
IC3452 (MEMORY)
IC3455 (USB DRIVE)
DSC JPEG/MPEG
IC2011 (RS232C DRIVER)
IC2001 MICROCOMPUTER (CONTROL/ CAMERA/ OSD MICROCOMPUTER)
IC2008 (EEPROM)
IC2009 (EVR DAC)
IC2010 (COMP)
(27M) OSC
IC2601 TIMER
(32.768K) OSC
CONTROL
LCD
(NV-GS5 Series, GS3EN/A/ENT Only)
IC601 (CONTROLLER & SIGNAL PROCESSOR)
(NV-GS4 Series, GS3EG/EGM/B, GS1 Series Only)
(NV-GS5 Series, GS3EN/A/ENT Only)
MONITOR
IC901 (CONTROLLER & SIGNAL PROCESSOR)
B/W EVF
IC801 (DISPLAY DRIVER)
EVF
2.5"LCD
B/W
0.5"LCD
MAIN C.B.A.
POWER
IC1001 (POWER)
POWER C.B.A.
NV-GS5,GS4,GS3,GS1
OVERALL SCHEMATIC DIAGRAM

(VEK9631: NV-GS5 SERIES, GS4 SERIES)
(VEK9632: NV-GS3 SERIES, GS1 SERIES)



(COMPONENT SIDE)



(FOIL SIDE)

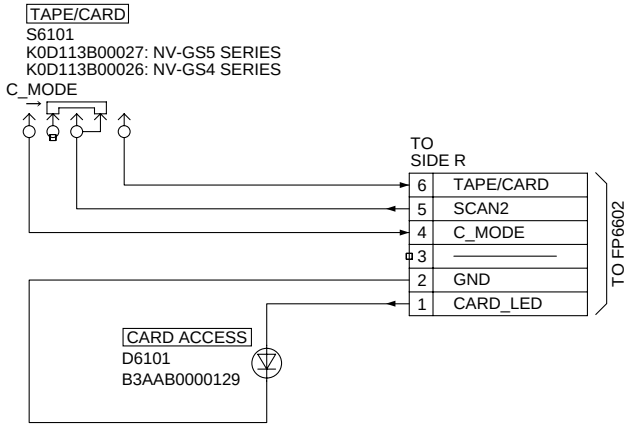
NV-GS5,GS4,GS3,GS1
SIDE (R) C.B.A. (RELAY C.B.A.)

B

A

1 2 3 4 5

(R FLEX. UNIT)



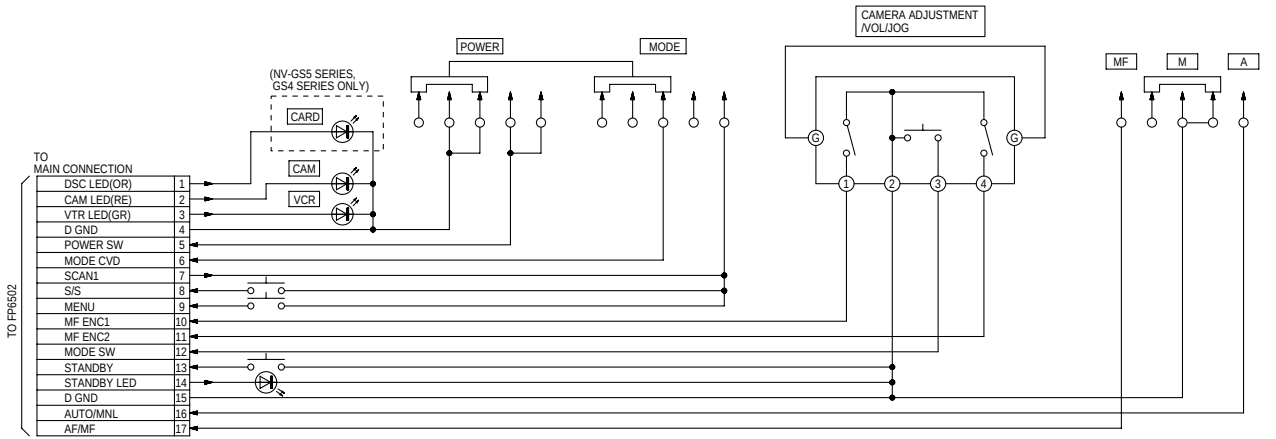
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NV-GS5, GS4, GS3, GS1
R FLEX. UNIT SCHEMATIC DIAGRAM
(NV-GS5, GS4 ONLY)

C B A

1 2 3 4

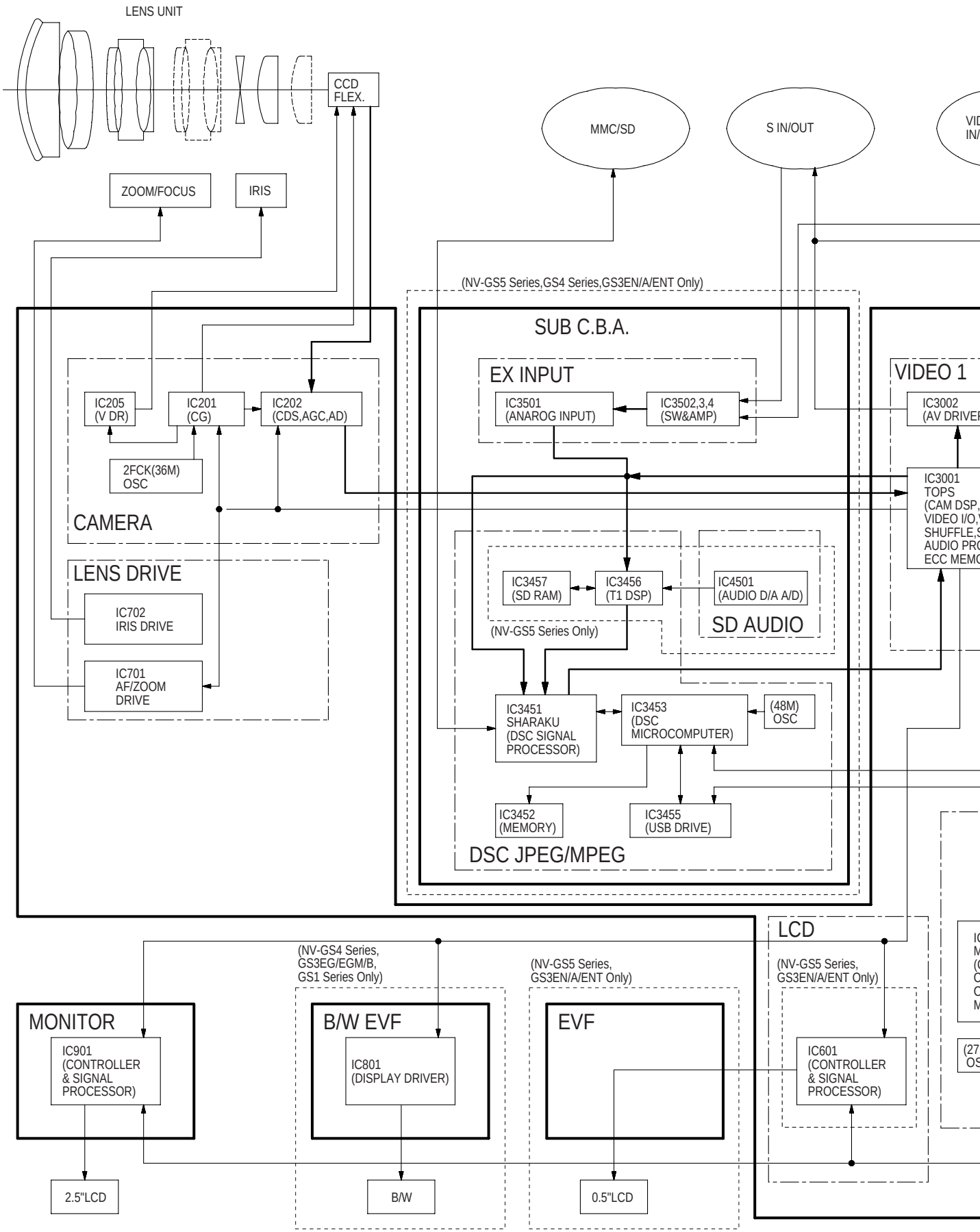
(REAR OPERATION UNIT)

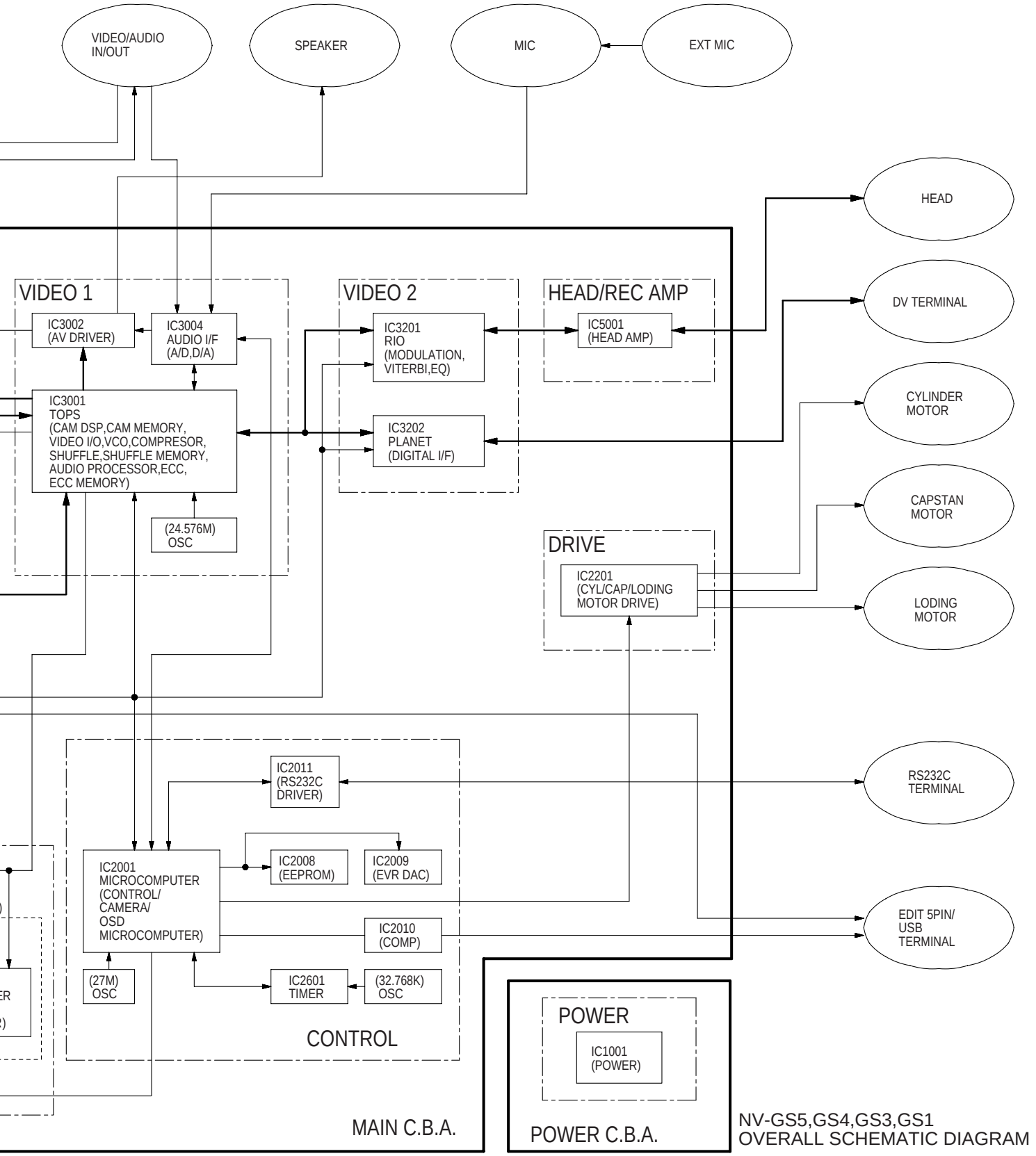


NV-GS5,GS4,GS3,GS1
REAR OPERATION UNIT
SCHEMATIC DIAGRAM

11 SCHEMATIC DIAGRAMS

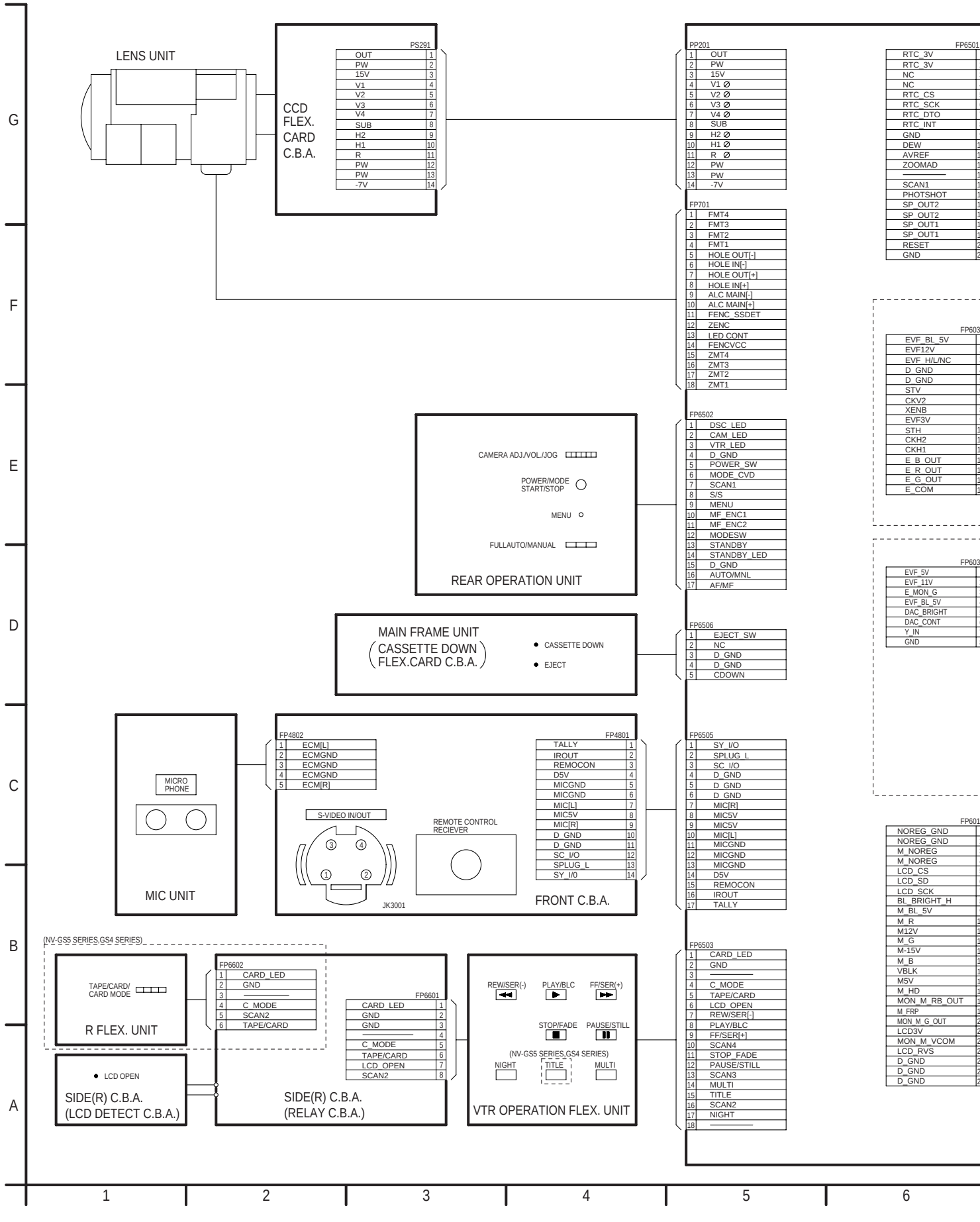
11.1. OVERALL SCHEMATIC DIAGRAM

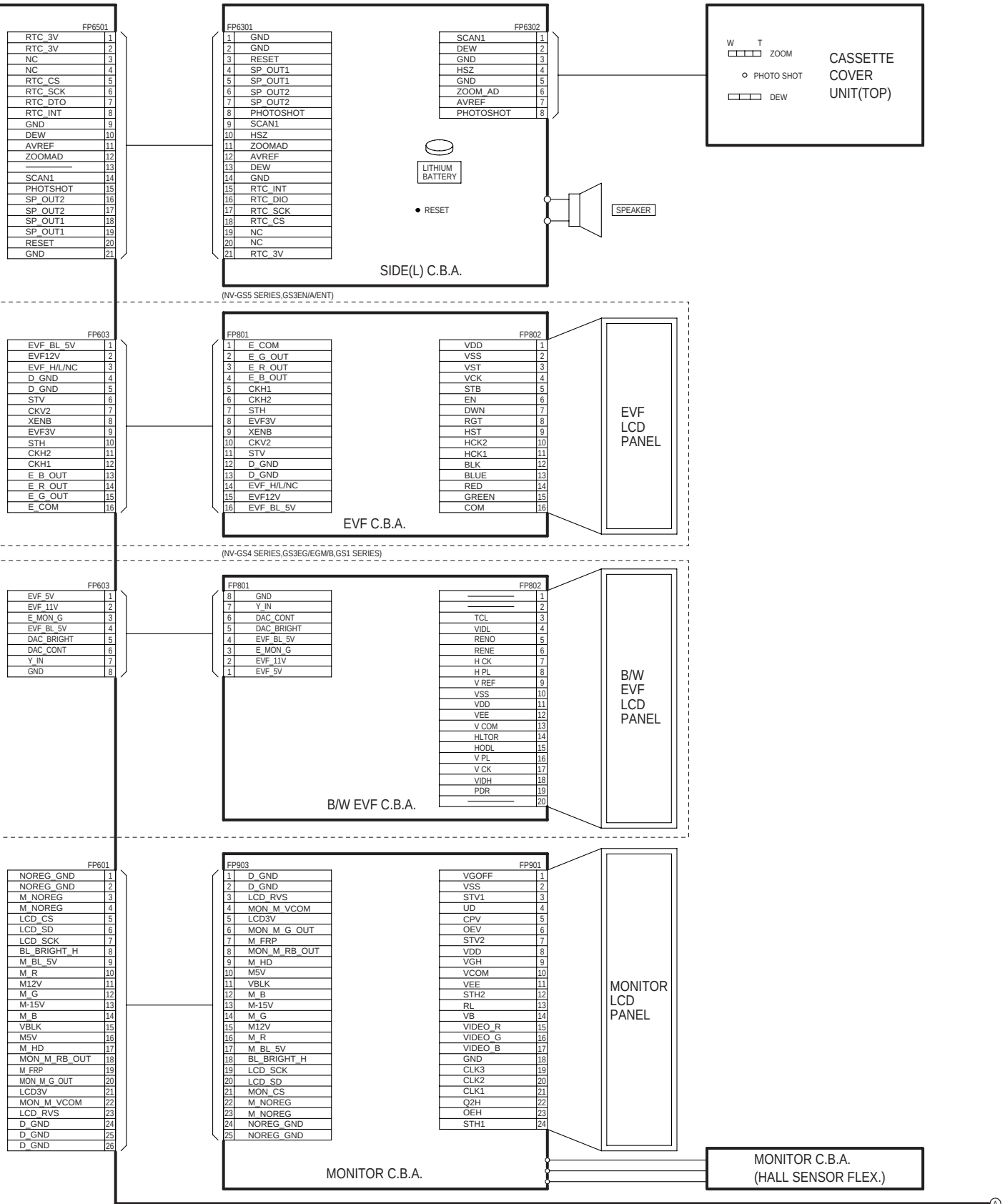




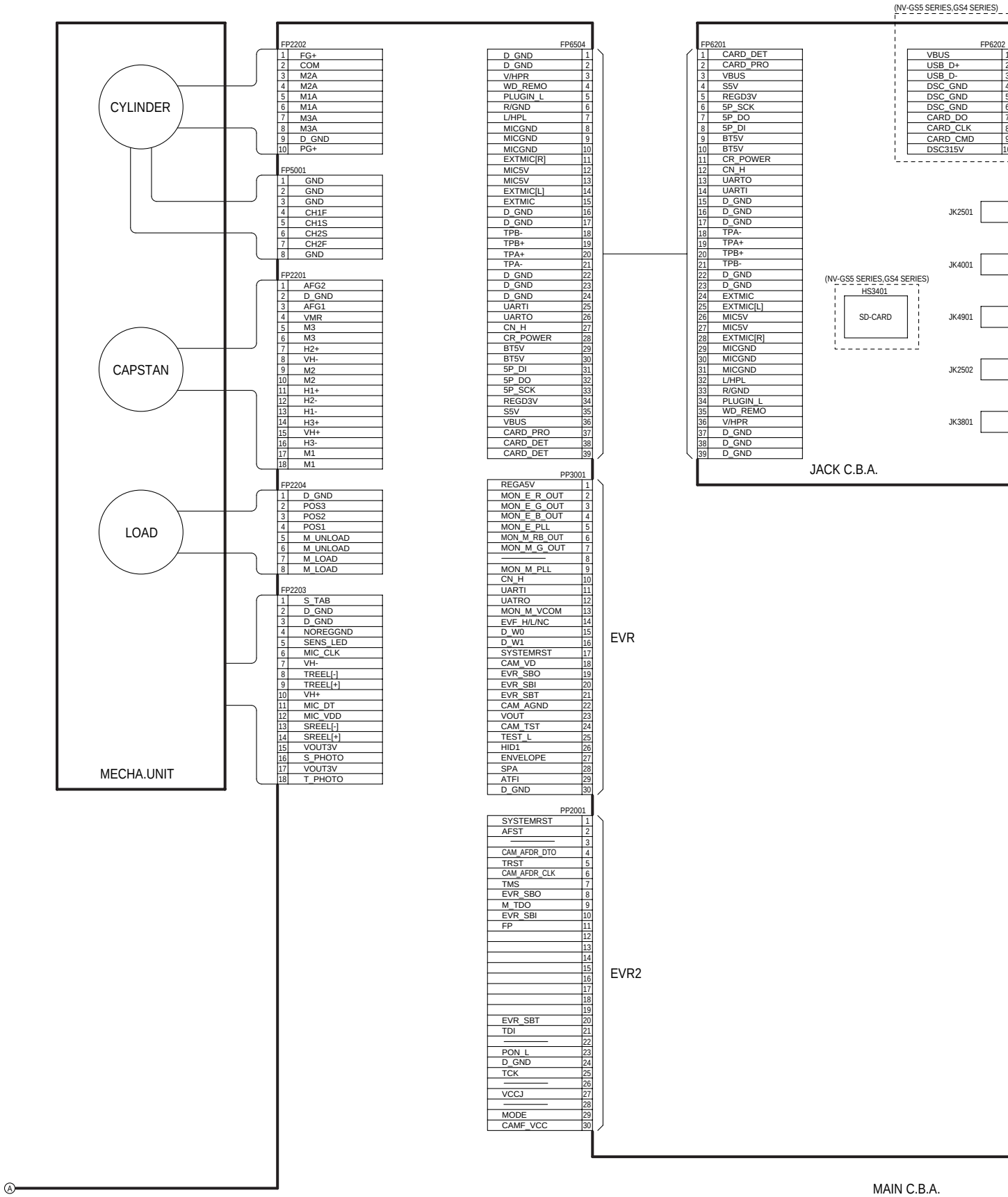
NV-GS5,GS4,GS3,GS1
OVERALL SCHEMATIC DIAGRAM

11.2. INTERCONNECTION SCHEMATIC DIAGRAM

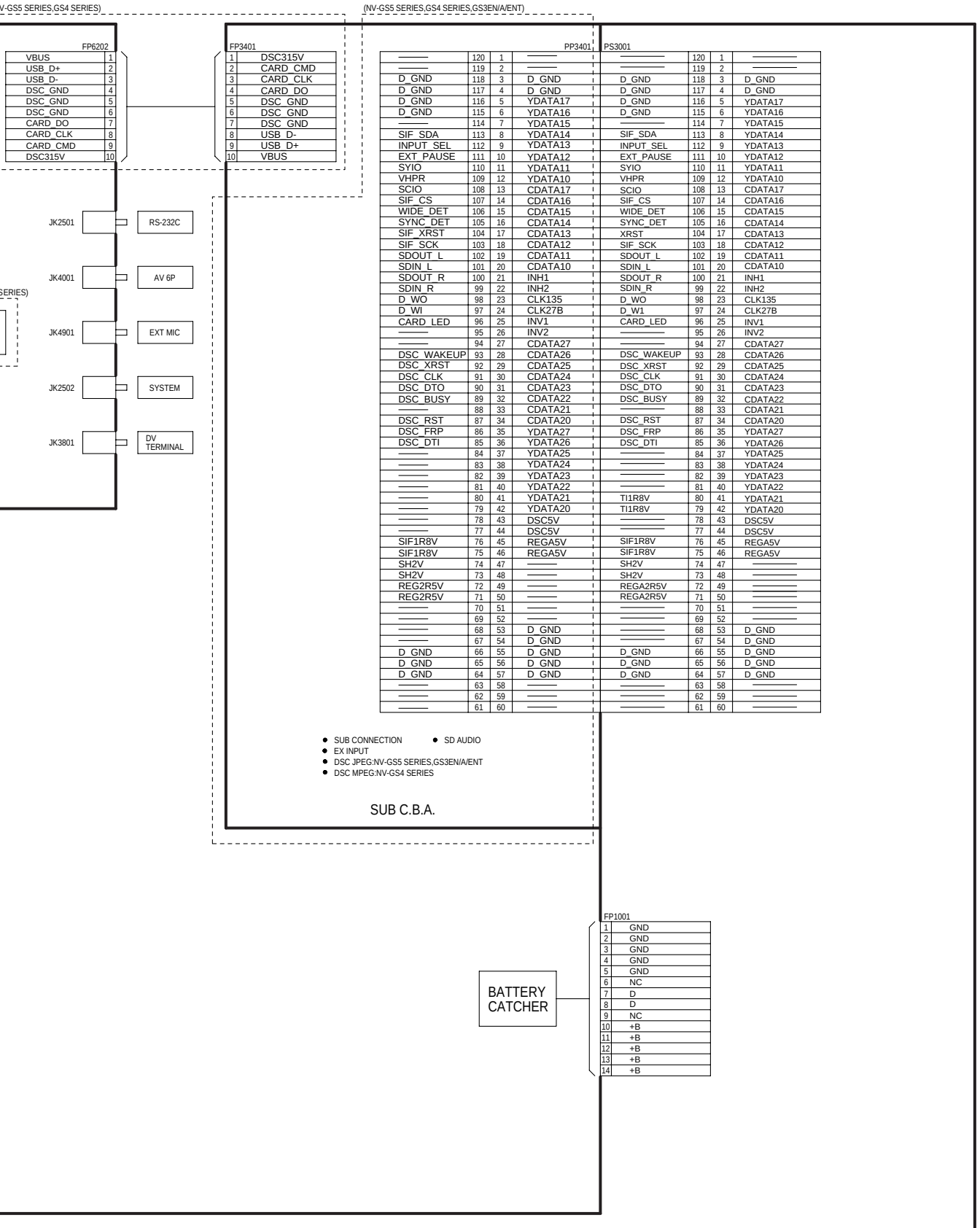




NV-GS5,GS4,GS3,GS1 INTERCONNECTION SCHEMATIC DIAGRAM

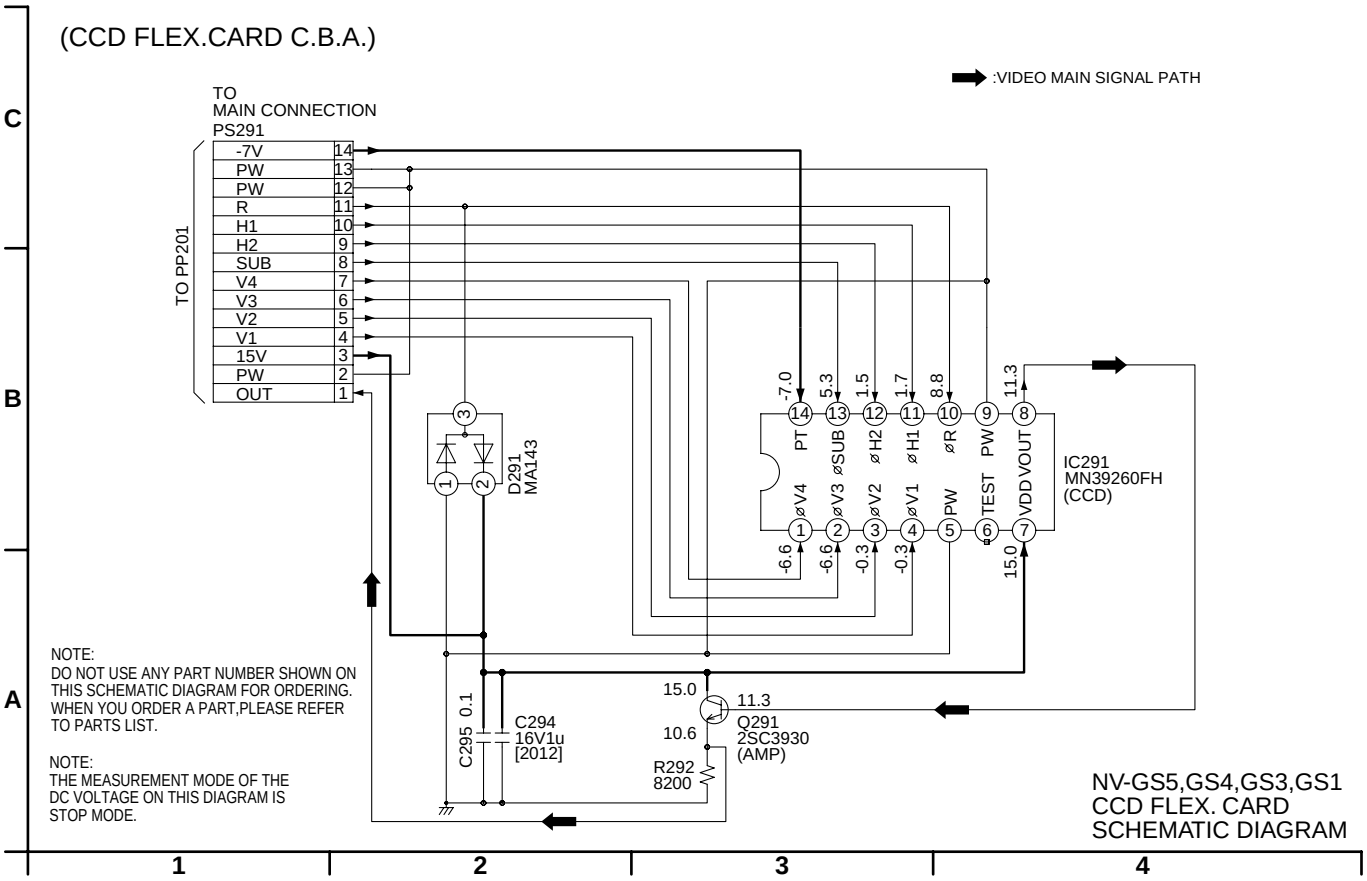


NV-GS5,GS4,GS3,GS1 INTERCONNECTION SCHEMATIC DIAGRAM

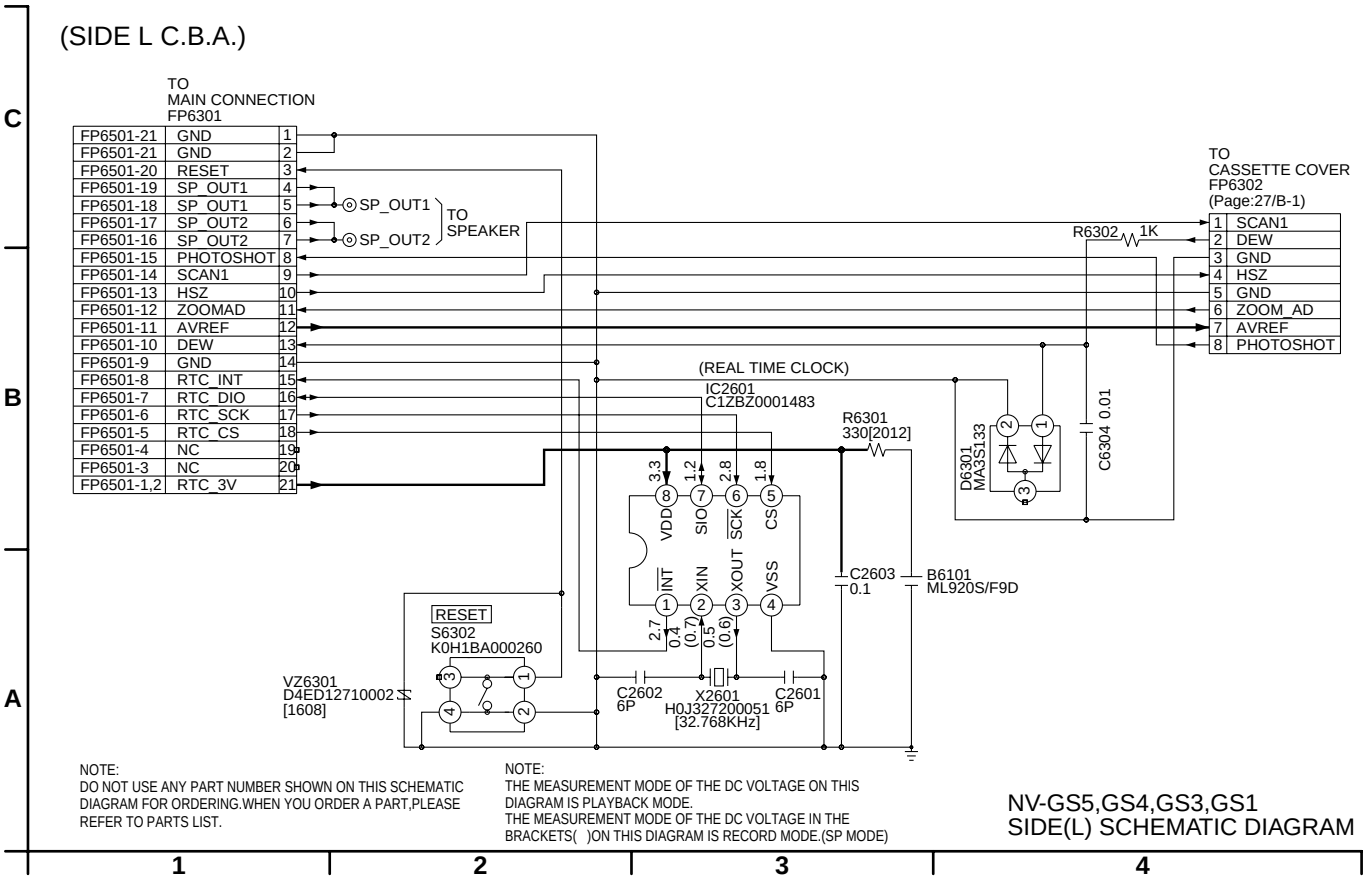

V-GS5 SERIES,GS4 SERIES)
(NV-GS5 SERIES,GS4 SERIES,GS3EN/A/ENT)
FP6202
VBUS 1
USB_D+ 2
USB_D- 3
DSC_GND 4
DSC_GND 5
DSC_GND 6
CARD_DO 7
CARD_CLK 8
CARD_CMD 9
DSC315V 10
FP3401
1 DSC315V
2 CARD_CMD
3 CARD_CLK
4 CARD_DO
5 DSC_GND
6 DSC_GND
7 DSC_GND
8 USB_D-
9 USB_D+
10 VBUS
PP3401
PS3001
120 1 ——— ——— 120 1 ———
119 2 ——— ——— 119 2 ———
D_GND 118 3 D_GND D_GND 118 3 D_GND
D_GND 117 4 D_GND D_GND 117 4 D_GND
D_GND 116 5 YDATA17 D_GND 116 5 YDATA17
D_GND 115 6 YDATA16 D_GND 115 6 YDATA16
——— 114 7 YDATA15 ——— 114 7 YDATA15
SIF_SDA 113 8 YDATA14 SIF_SDA 113 8 YDATA14
INPUT_SEL 112 9 YDATA13 INPUT_SEL 112 9 YDATA13
EXT_PAUSE 111 10 YDATA12 EXT_PAUSE 111 10 YDATA12
SYIO 110 11 YDATA11 SYIO 110 11 YDATA11
VHPR 109 12 YDATA10 VHPR 109 12 YDATA10
SCIO 108 13 CDATA17 SCIO 108 13 CDATA17
SIF_CS 107 14 CDATA16 SIF_CS 107 14 CDATA16
WIDE_DET 106 15 CDATA15 WIDE_DET 106 15 CDATA15
SYNC_DET 105 16 CDATA14 SYNC_DET 105 16 CDATA14
SIF_XRST 104 17 CDATA13 XRST 104 17 CDATA13
SIF_SCK 103 18 CDATA12 SIF_SCK 103 18 CDATA12
SDOUT_L 102 19 CDATA11 SDOUT_L 102 19 CDATA11
SDIN_L 101 20 CDATA10 SDIN_L 101 20 CDATA10
SDOUT_R 100 21 INH1 SDOUT_R 100 21 INH1
SDIN_R 99 22 INH2 SDIN_R 99 22 INH2
D_WO 98 23 CLK135 D_WO 98 23 CLK135
D_WI 97 24 CLK27B D_W1 97 24 CLK27B
CARD_LED 96 25 INV1 CARD_LED 96 25 INV1
——— 95 26 INV2 ——— 95 26 INV2
——— 94 27 CDATA27 ——— 94 27 CDATA27
DSC_WAKEUP 93 28 CDATA26 DSC_WAKEUP 93 28 CDATA26
DSC_XRST 92 29 CDATA25 DSC_XRST 92 29 CDATA25
DSC_CLK 91 30 CDATA24 DSC_CLK 91 30 CDATA24
DSC_DTO 90 31 CDATA23 DSC_DTO 90 31 CDATA23
DSC_BUSY 89 32 CDATA22 DSC_BUSY 89 32 CDATA22
——— 88 33 CDATA21 ——— 88 33 CDATA21
DSC_RST 87 34 CDATA20 DSC_RST 87 34 CDATA20
DSC_FRP 86 35 YDATA27 DSC_FRP 86 35 YDATA27
DSC_DTI 85 36 YDATA26 DSC_DTI 85 36 YDATA26
——— 84 37 YDATA25 ——— 84 37 YDATA25
——— 83 38 YDATA24 ——— 83 38 YDATA24
——— 82 39 YDATA23 ——— 82 39 YDATA23
——— 81 40 YDATA22 ——— 81 40 YDATA22
——— 80 41 YDATA21 TI1R8V 80 41 YDATA21
——— 79 42 YDATA20 TI1R8V 79 42 YDATA20
——— 78 43 DSC5V ——— 78 43 DSC5V
——— 77 44 DSC5V ——— 77 44 DSC5V
SIF1R8V 76 45 REGA5V SIF1R8V 76 45 REGA5V
SIF1R8V 75 46 REGA5V SIF1R8V 75 46 REGA5V
SH2V 74 47 ——— SH2V 74 47 ———
SH2V 73 48 ——— SH2V 73 48 ———
REG2R5V 72 49 ——— REGA2R5V 72 49 ———
REG2R5V 71 50 ——— REGA2R5V 71 50 ———
——— 70 51 ——— ——— 70 51 ———
——— 69 52 ——— ——— 69 52 ———
——— 68 53 D_GND ——— 68 53 D_GND
——— 67 54 D_GND ——— 67 54 D_GND
D_GND 66 55 D_GND D_GND 66 55 D_GND
D_GND 65 56 D_GND D_GND 65 56 D_GND
D_GND 64 57 D_GND D_GND 64 57 D_GND
——— 63 58 ——— ——— 63 58 ———
——— 62 59 ——— ——— 62 59 ———
——— 61 60 ——— ——— 61 60 ———
JK2501 RS-232C
JK4001 AV 6P
JK4901 EXT MIC
JK2502 SYSTEM
JK3801 DV TERMINAL
SERIES)
SUB CONNECTION
SD AUDIO
EX INPUT
DSC JPEG:NV-GS5 SERIES,GS3EN/A/ENT
DSC MPEG:NV-GS4 SERIES
SUB C.B.A.
FP1001
1 GND
2 GND
3 GND
4 GND
5 GND
6 NC
7 D
8 D
9 NC
10 +B
11 +B
12 +B
13 +B
14 +B
BATTERY CATCHER
C.B.A.

NV-GS5,GS4,GS3,GS1 INTERCONNECTION SCHEMATIC DIAGRAM

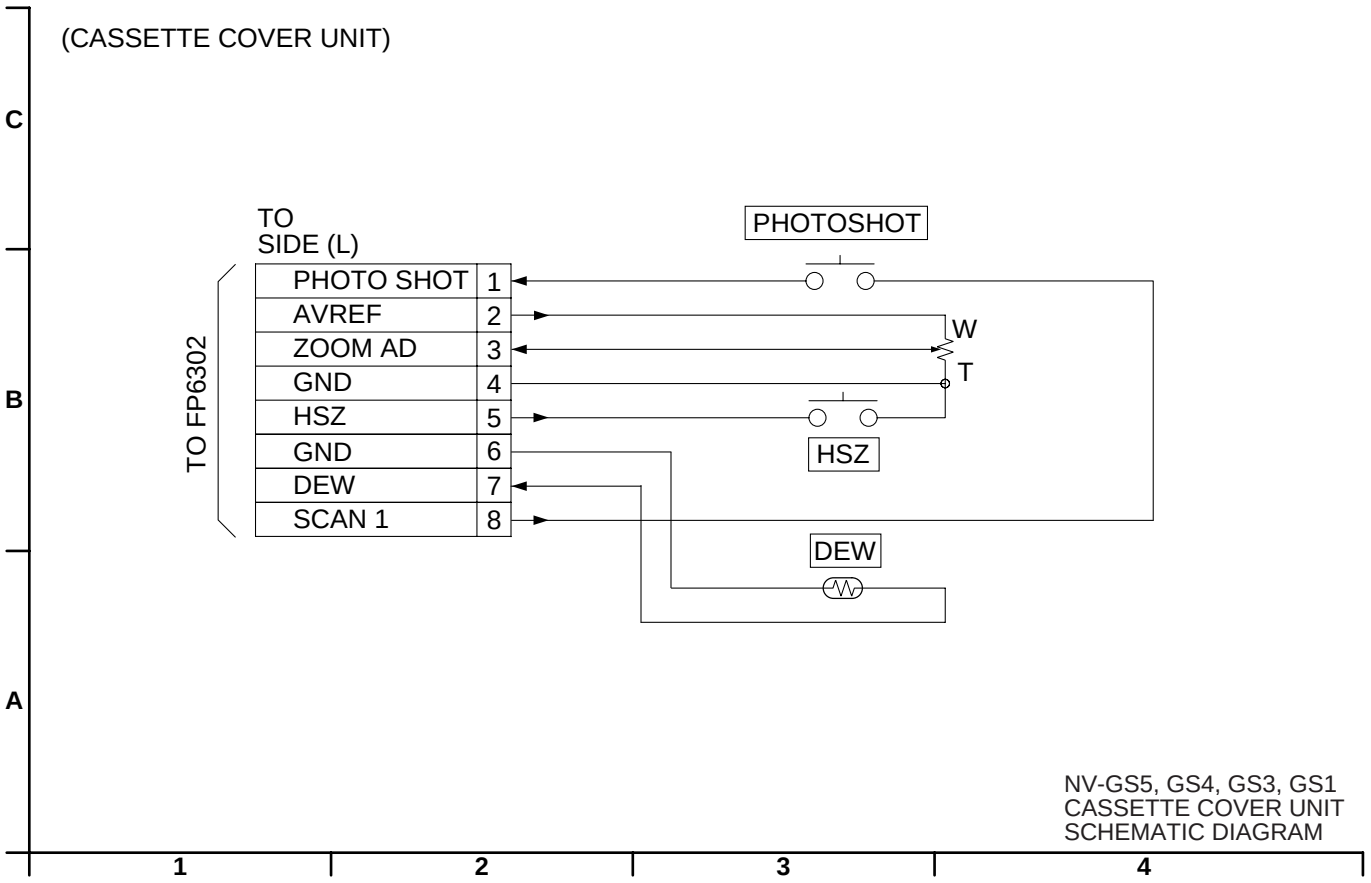
11.3. CCD FLEX. CARD SCHEMATIC DIAGRAM



11.4. SIDE (L) SCHEMATIC DIAGRAM

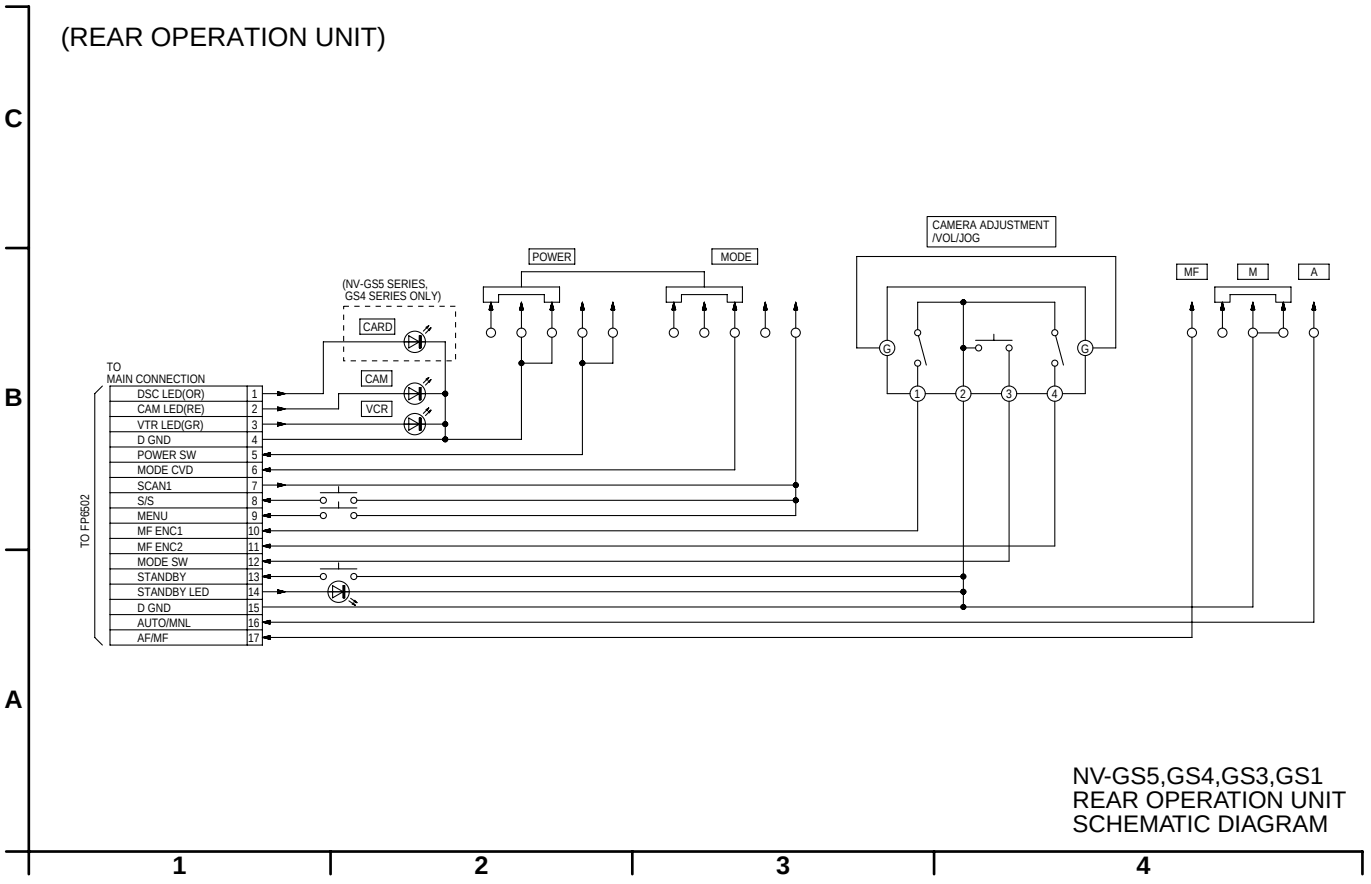


11.5. CASSETTE COVER UNIT SCHEMATIC DIAGRAM



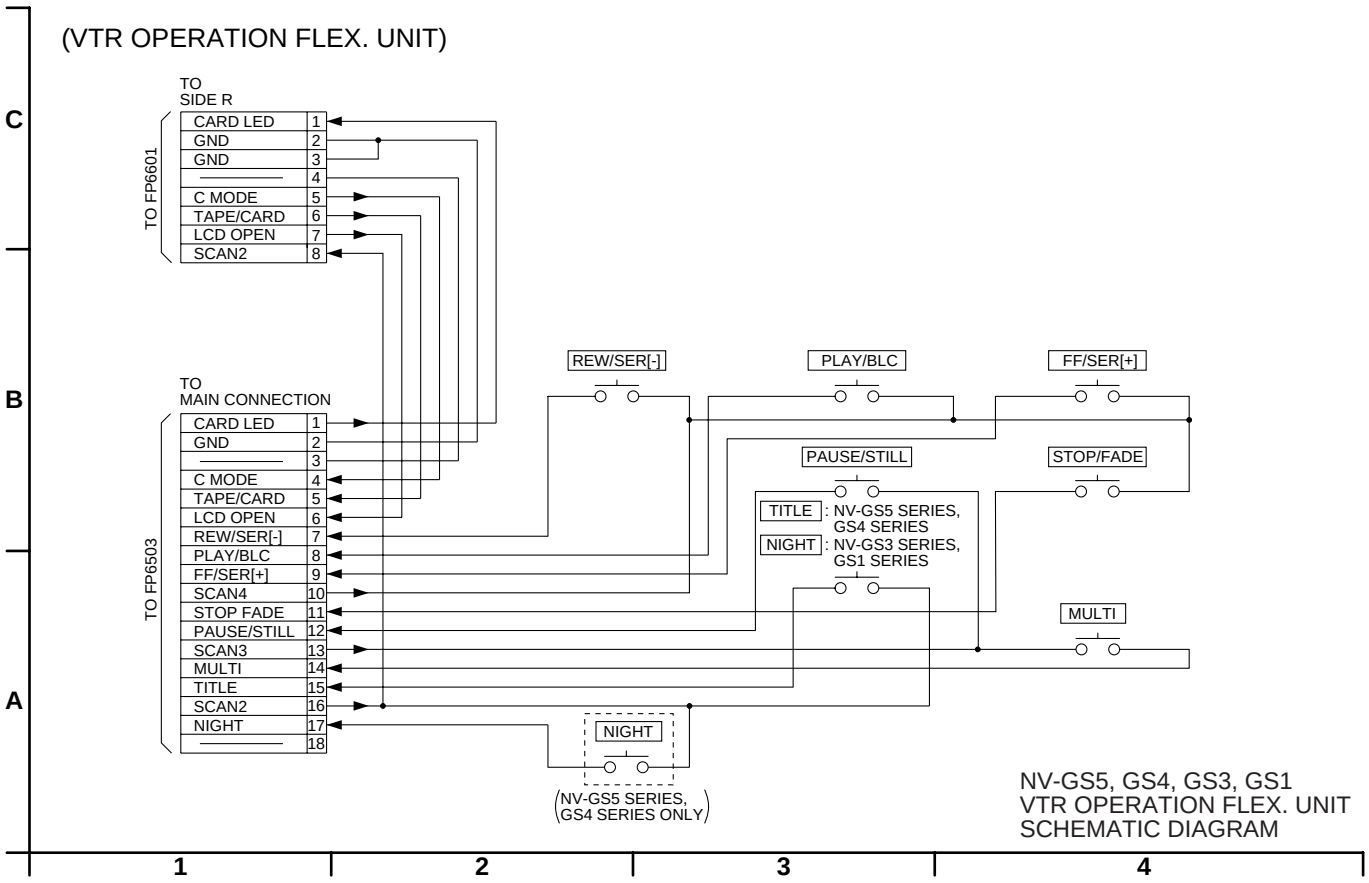
NV-GS5, GS4, GS3, GS1
CASSETTE COVER UNIT
SCHEMATIC DIAGRAM

11.6. REAR OPERATION UNIT SCHEMATIC DIAGRAM

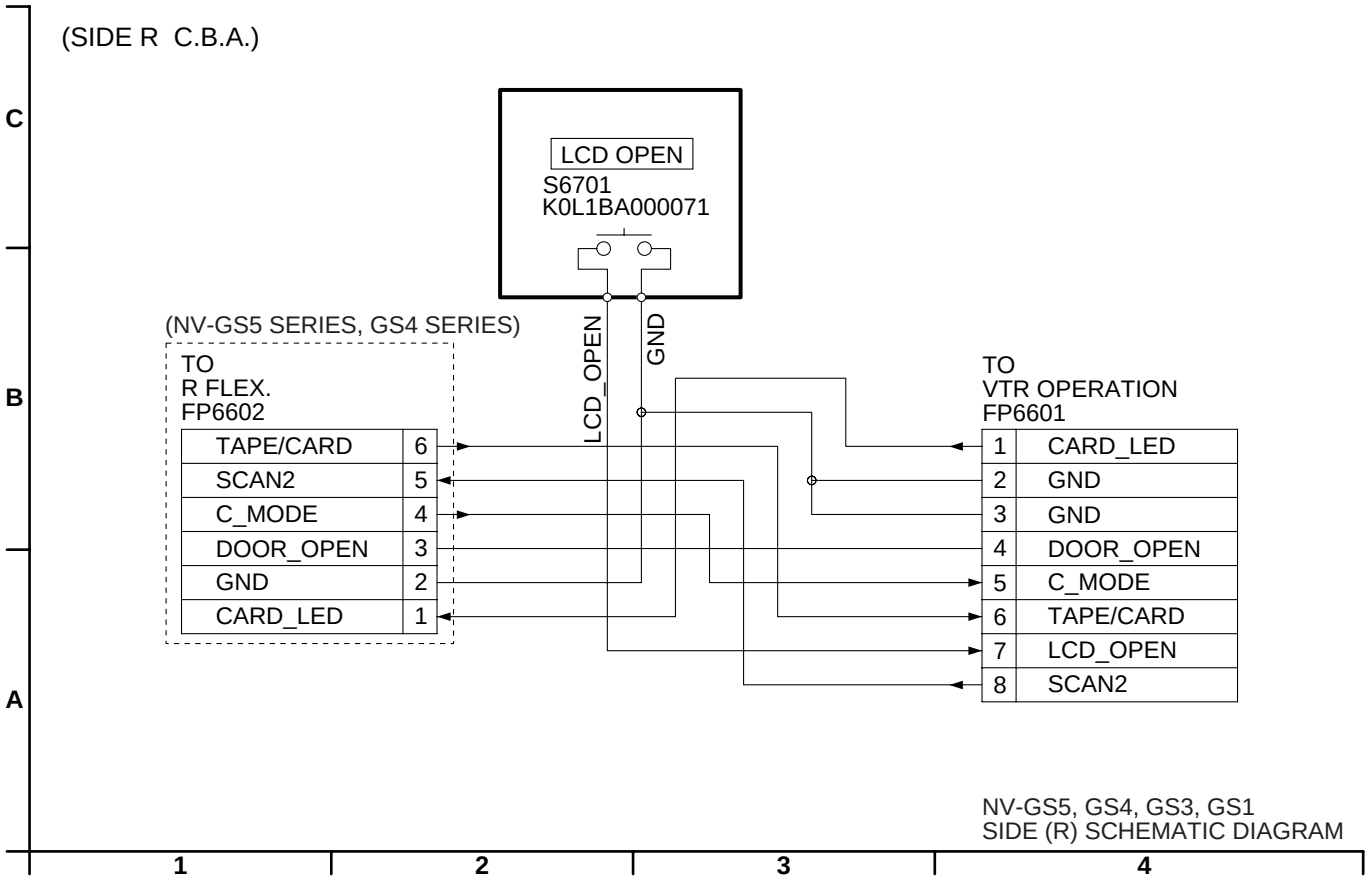


NV-GS5,GS4,GS3,GS1
REAR OPERATION UNIT
SCHEMATIC DIAGRAM

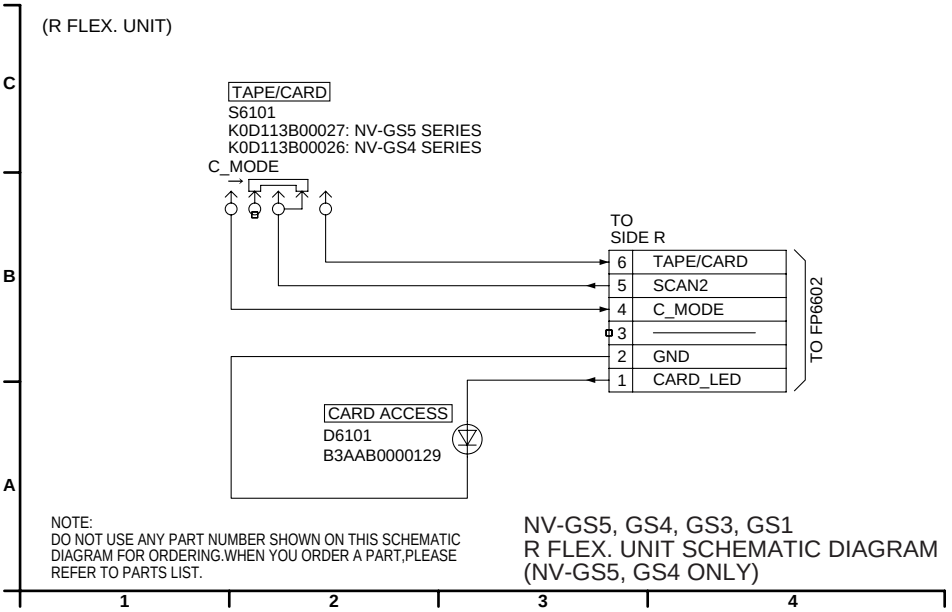
11.7. VTR OPERATION FLEX. UNIT SCHEMATIC DIAGRAM



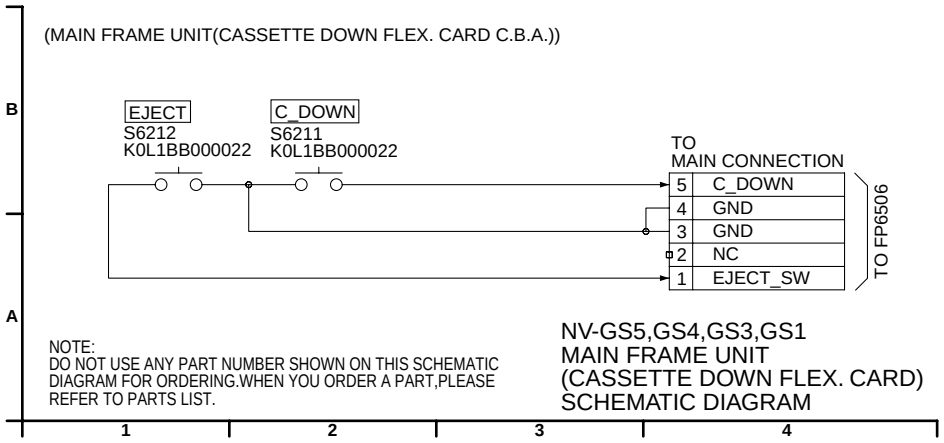
11.8. SIDE (R) SCHEMATIC DIAGRAM



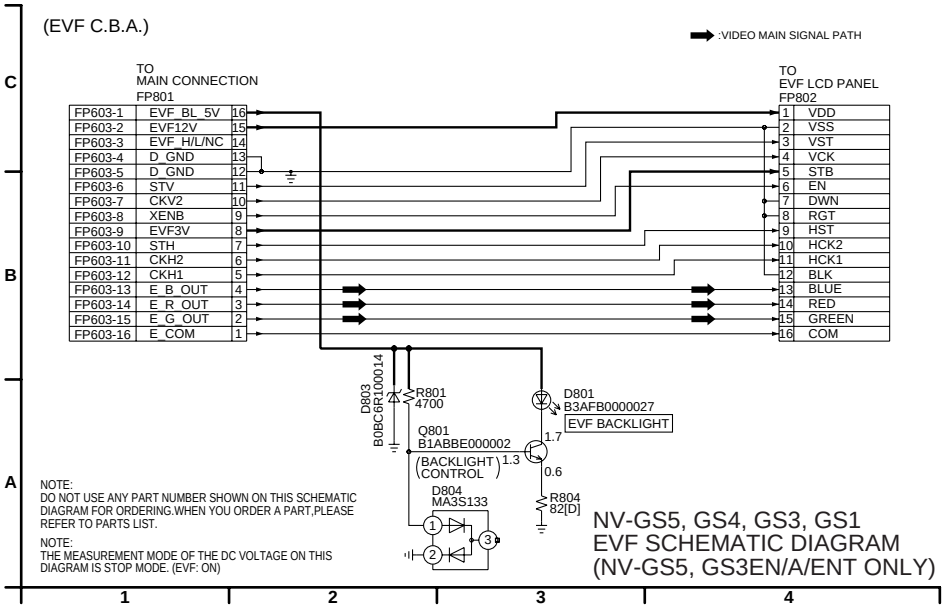
11.9. R FLEX. UNIT SCHEMATIC DIAGRAM (NV-GS5, GS4 ONLY)



11.10. MAIN FRAME UNIT (CASSETTE DOWN FLEX. CARD) SCHEMATIC DIAGRAM

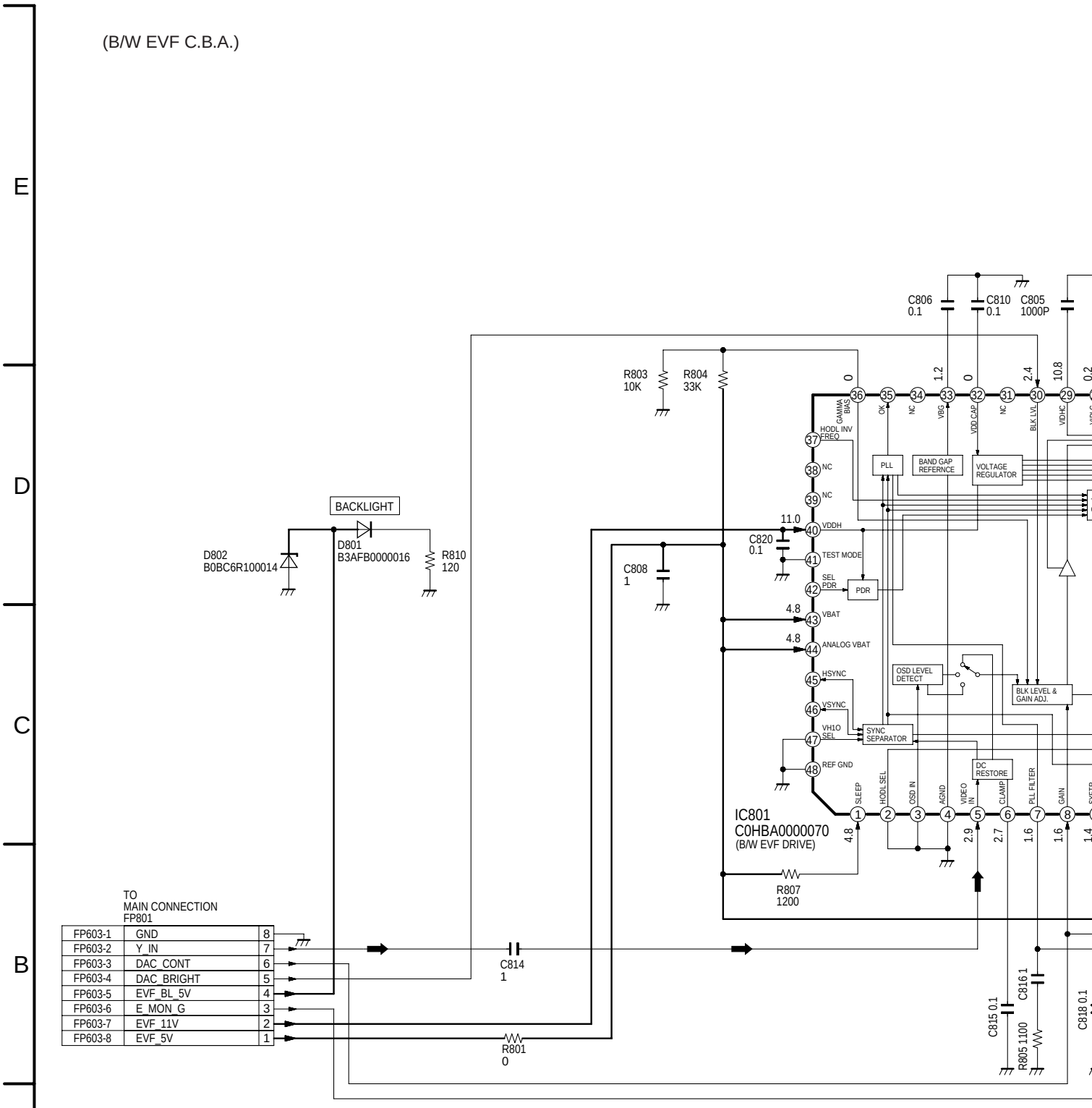


11.11. EVF SCHEMATIC DIAGRAM (NV-GS5, GS3EN/A/ENT ONLY)



11.12. B/W EVF SCHEMATIC DIAGRAM (NV-GS4, GS3EG/EGM/B, GS1 ONLY)

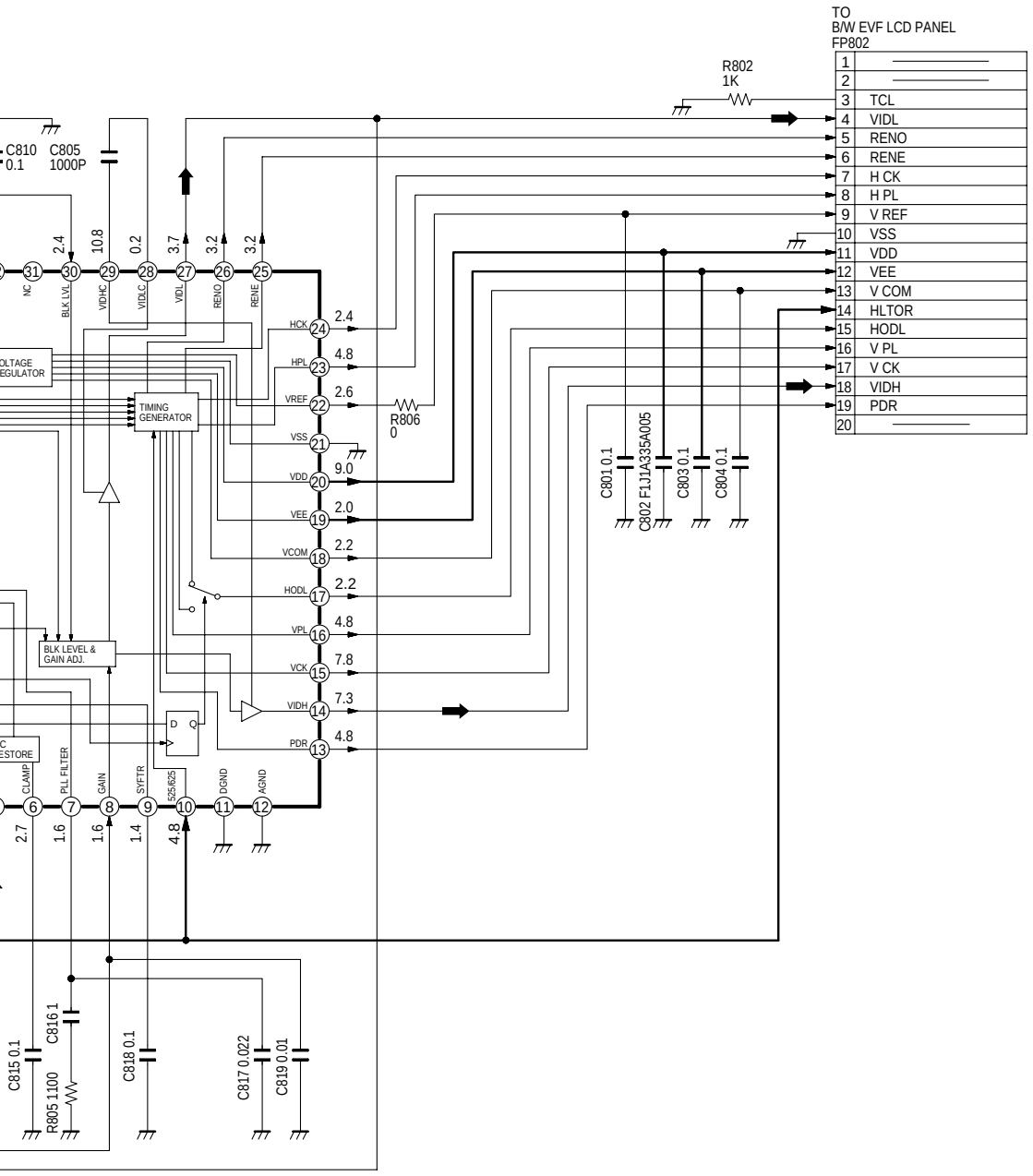
(B/W EVF C.B.A.)



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGREM IS S

:VIDEO MAIN SIGNAL PATH

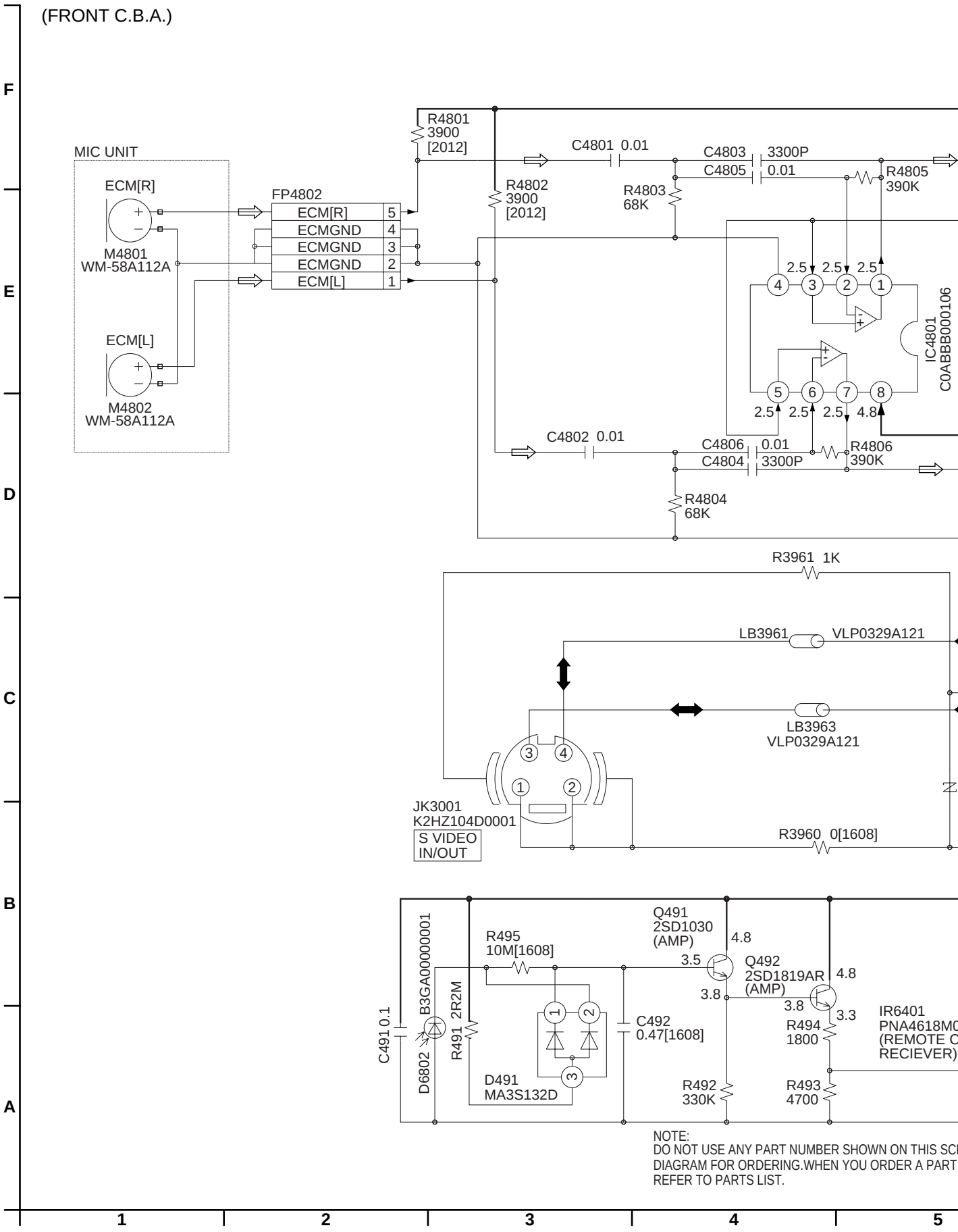


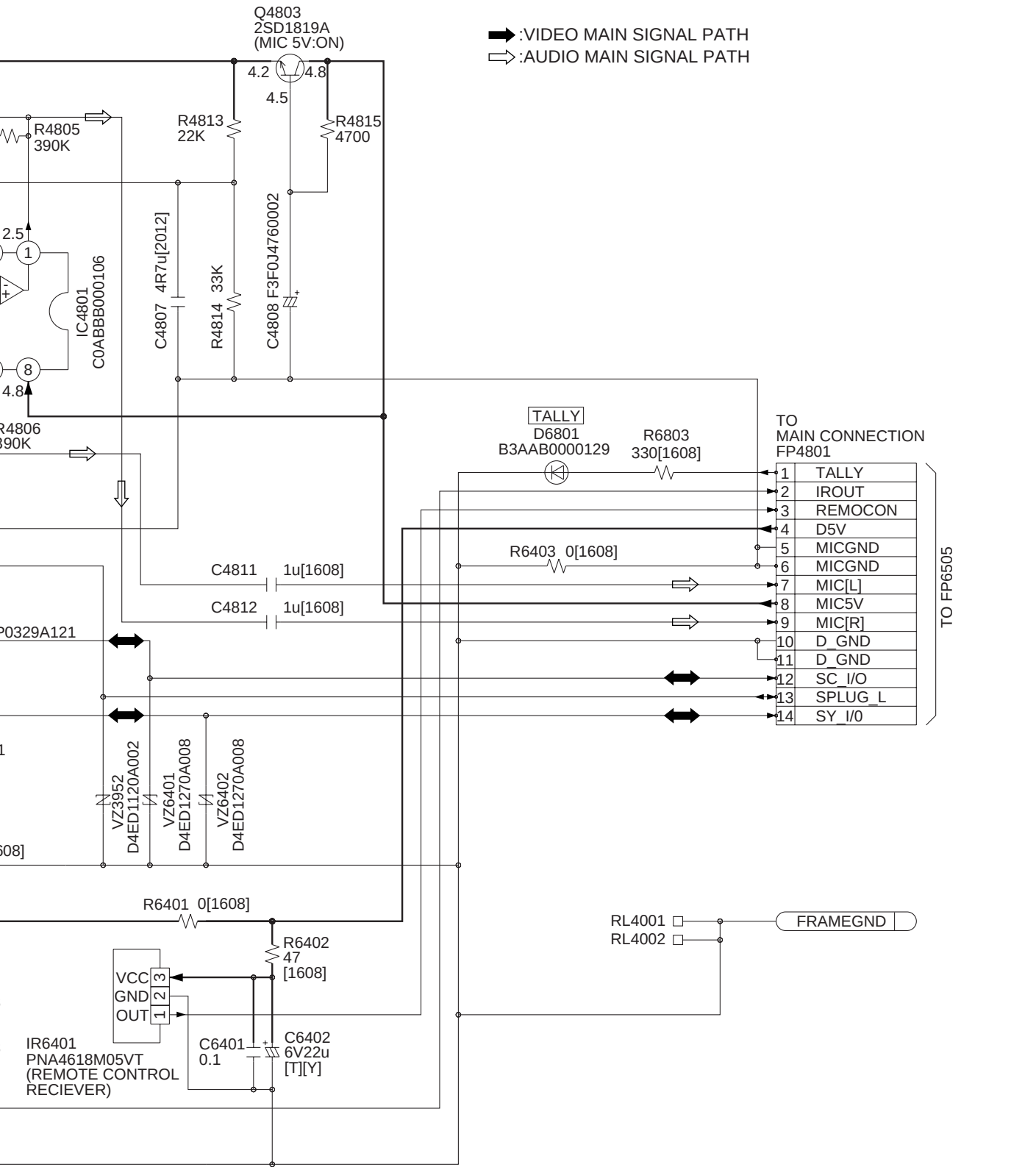
ON THIS DIAGREM IS STOP MODE.(EVF:ON)

NV-GS5,GS4,GS3,GS1
B/W EVF SCHEMATIC DIAGRAM
(NV-GS4,GS3EG/EGM/B,GS1 ONLY)

5 6 7

11.13. FRONT & MIC UNIT SCHEMATIC DIAGRAM





HOWN ON THIS SCHEMATIC
DU ORDER A PART,PLEASE

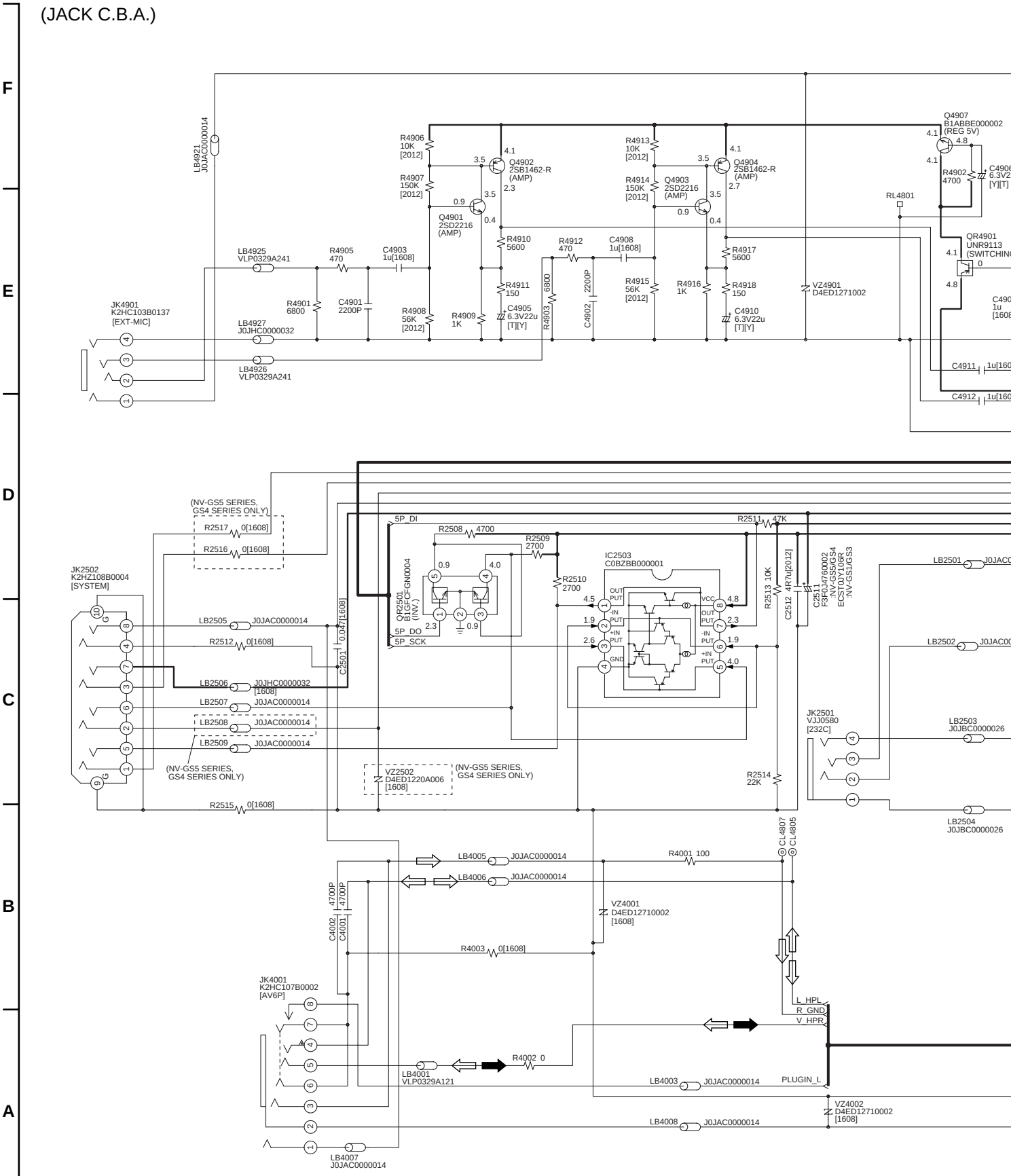
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

NV-GS5,GS4,GS3,GS1
FRONT & MIC UNIT SCHEMATIC DIAGRAM

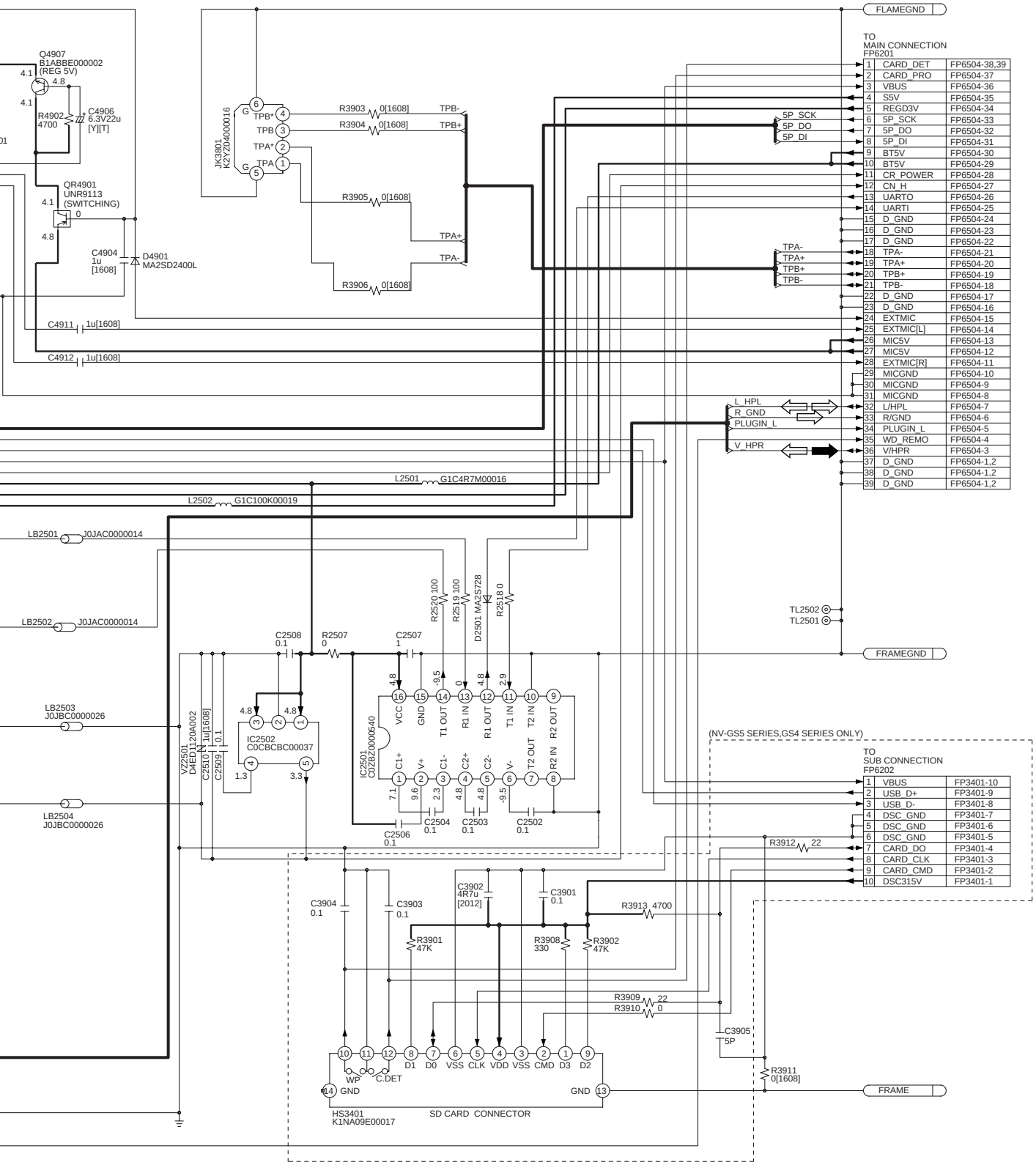
5 | 6 | 7 | 8 | 9

11.14. JACK SCHEMATIC DIAGRAM

(JACK C.B.A.)



:VIDEO MAIN SIGNAL PATH
:AUDIO MAIN SIGNAL PATH



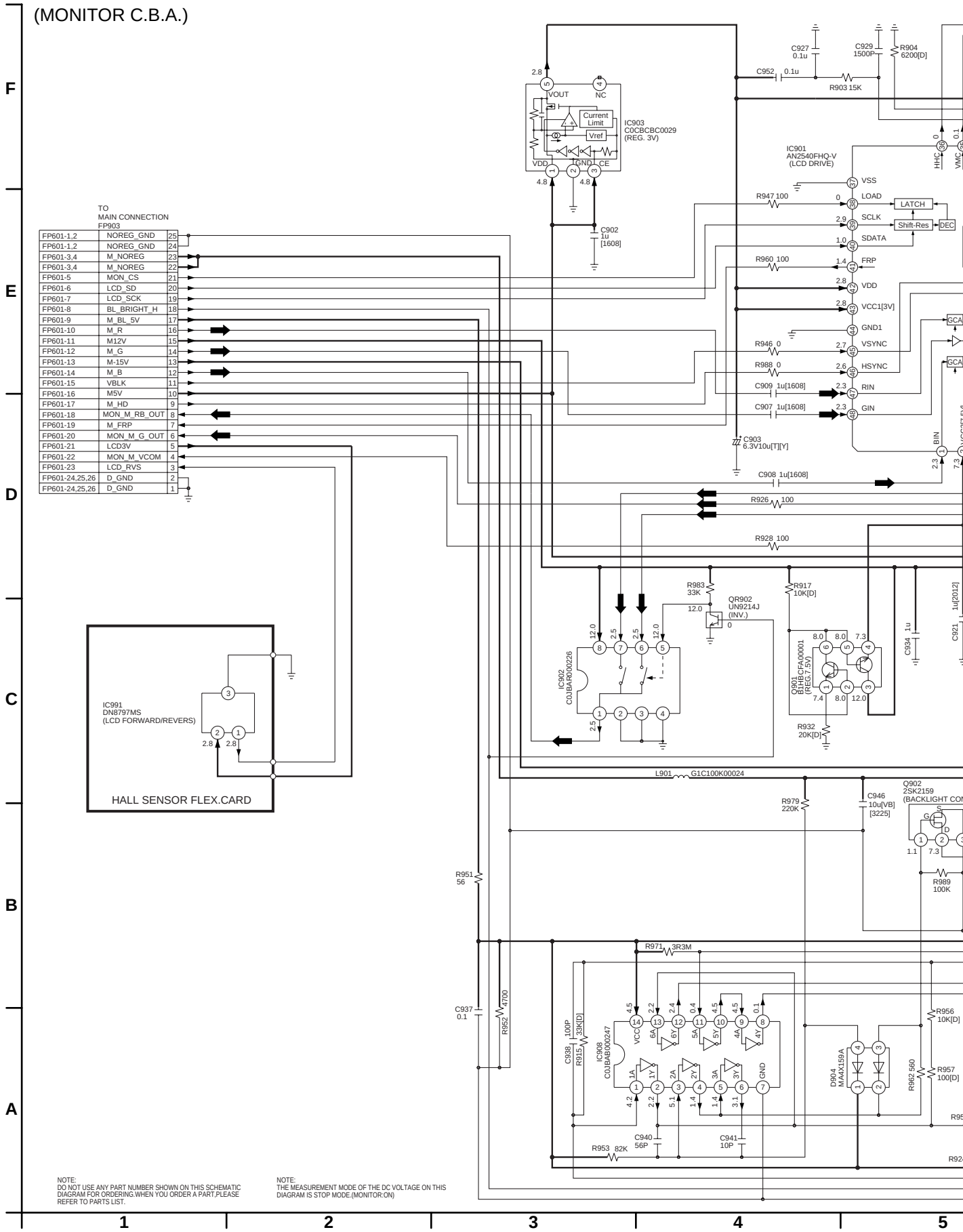
NOTE:
DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

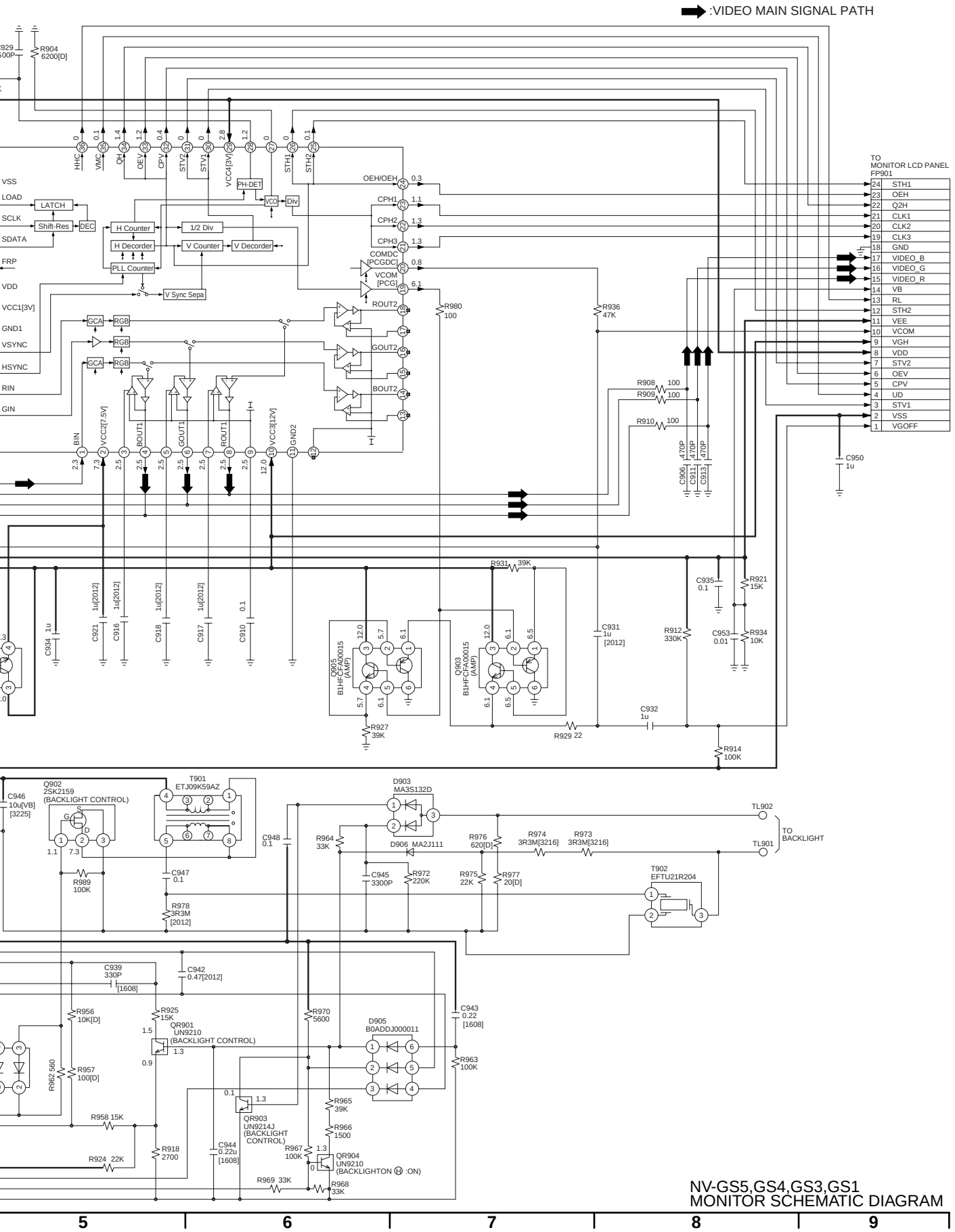
NOTE:
THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS PLAYBACK MODE.THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

NV-GS5,GS4,GS3,GS1 JACK SCHEMATIC DIAGRAM

5 | 6 | 7 | 8 | 9

11.15. MONITOR SCHEMATIC DIAGRAM

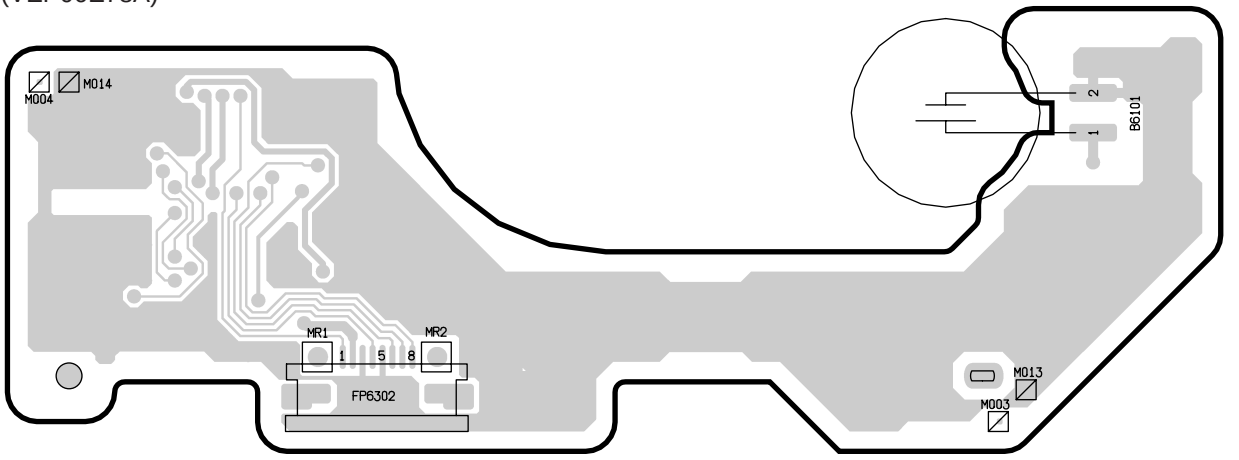




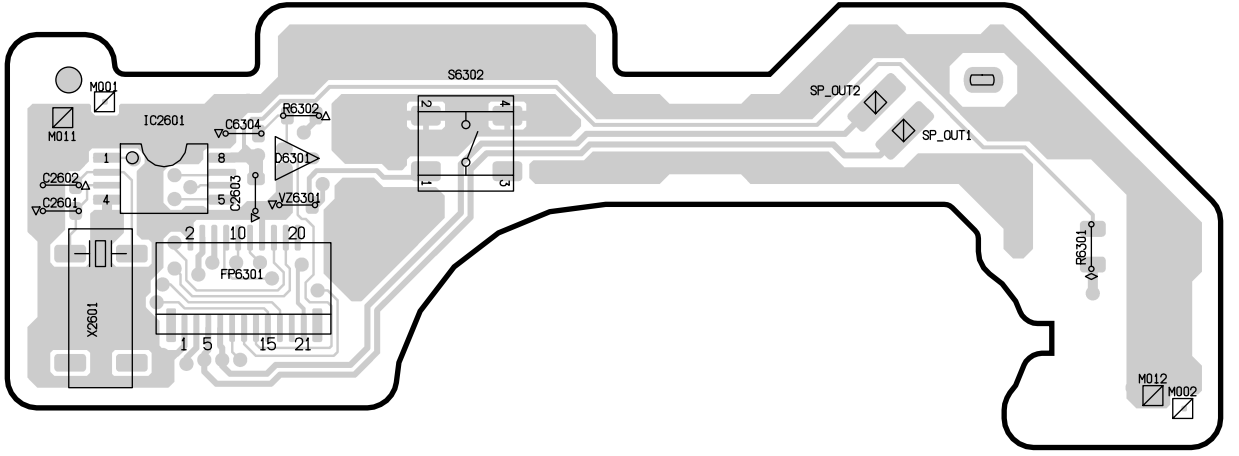
NV-GS5,GS4,GS3,GS1
MONITOR SCHEMATIC DIAGRAM

5 | 6 | 7 | 8 | 9

(VEP06E78A)



(COMPONENT SIDE)



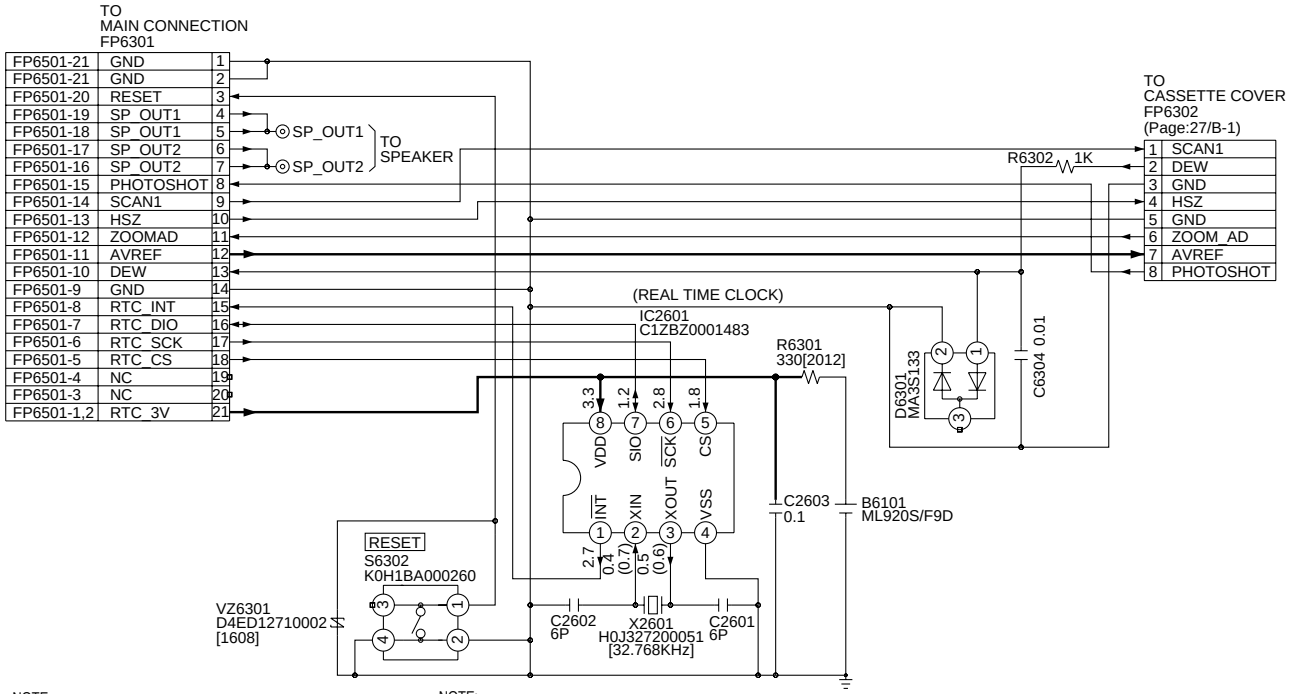
(FOIL SIDE)

NV-GS5,GS4,GS3,GS1
SIDE (L) C.B.A.

D C B A

1 2 3 4 5

(SIDE L C.B.A.)



NOTE:
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NOTE:
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THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

NV-GS5,GS4,GS3,GS1
SIDE(L) SCHEMATIC DIAGRAM

C B A

1 2 3 4

Service Manual

TOP NEXT

ORDER NO. VMD0109026C8

Service Manual

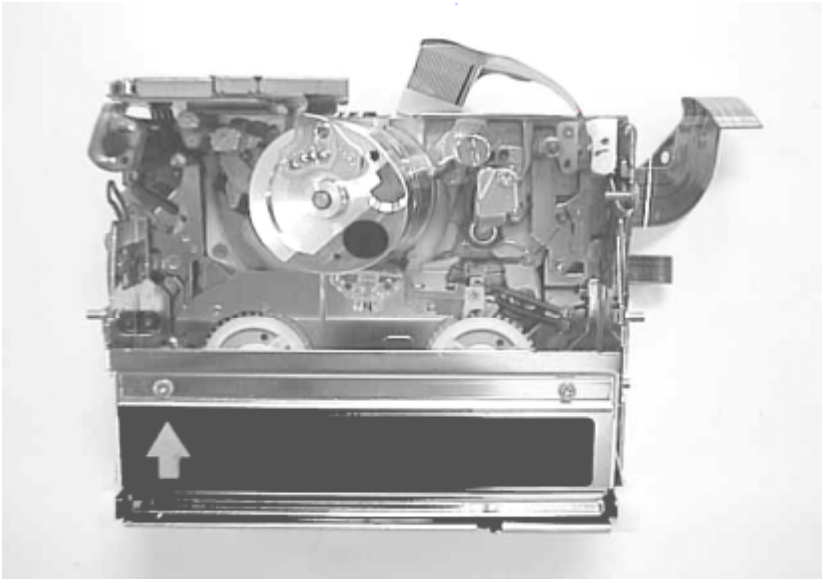
Digital Video Camera/Recorder

Panasonic Mini DV

- Q-MECHANISM

(Including Q1, Q2&Q3)

Disassembly/Assembly Procedures
Adjustment Procedures



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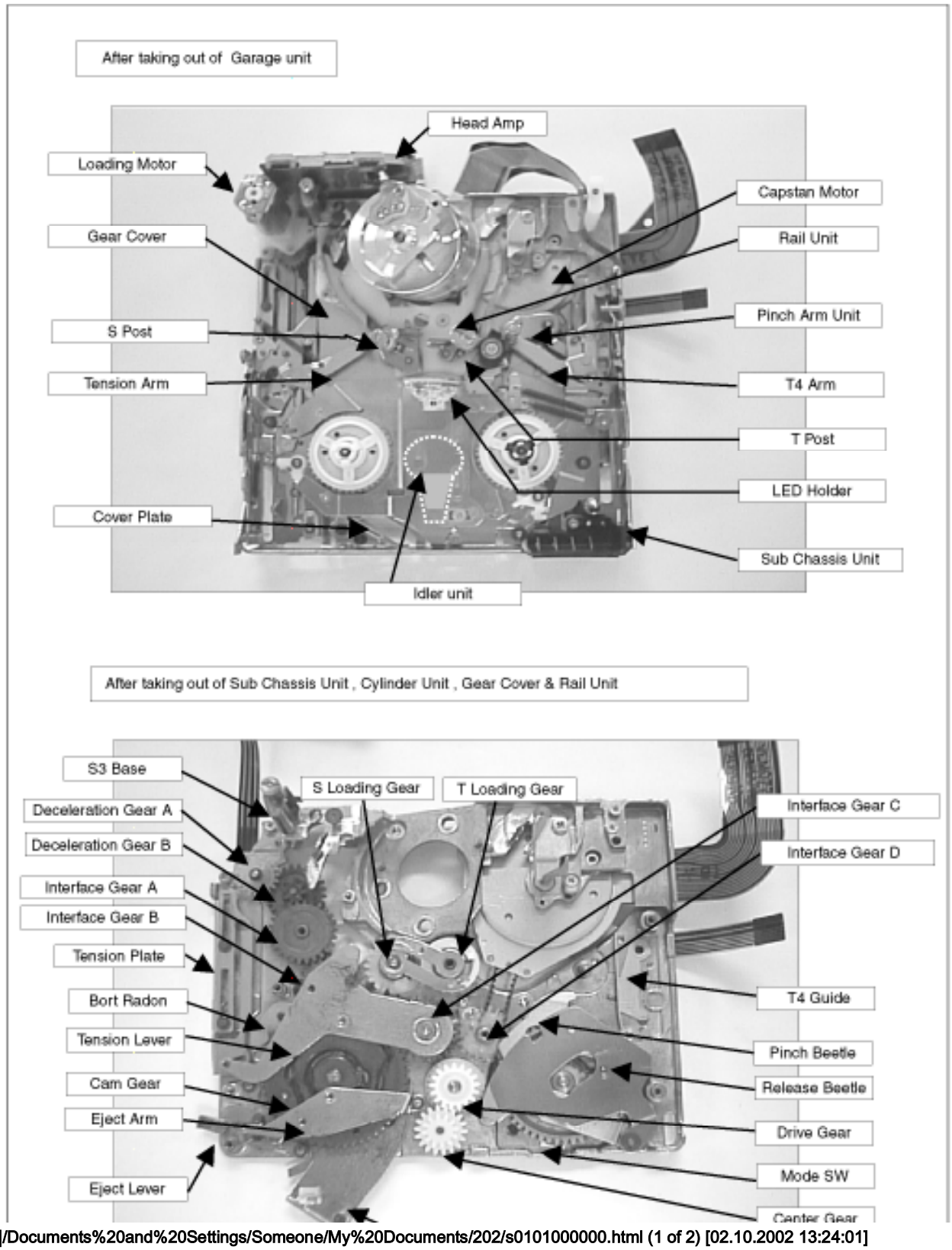
Panasonic

1.1 UPPER SIDE

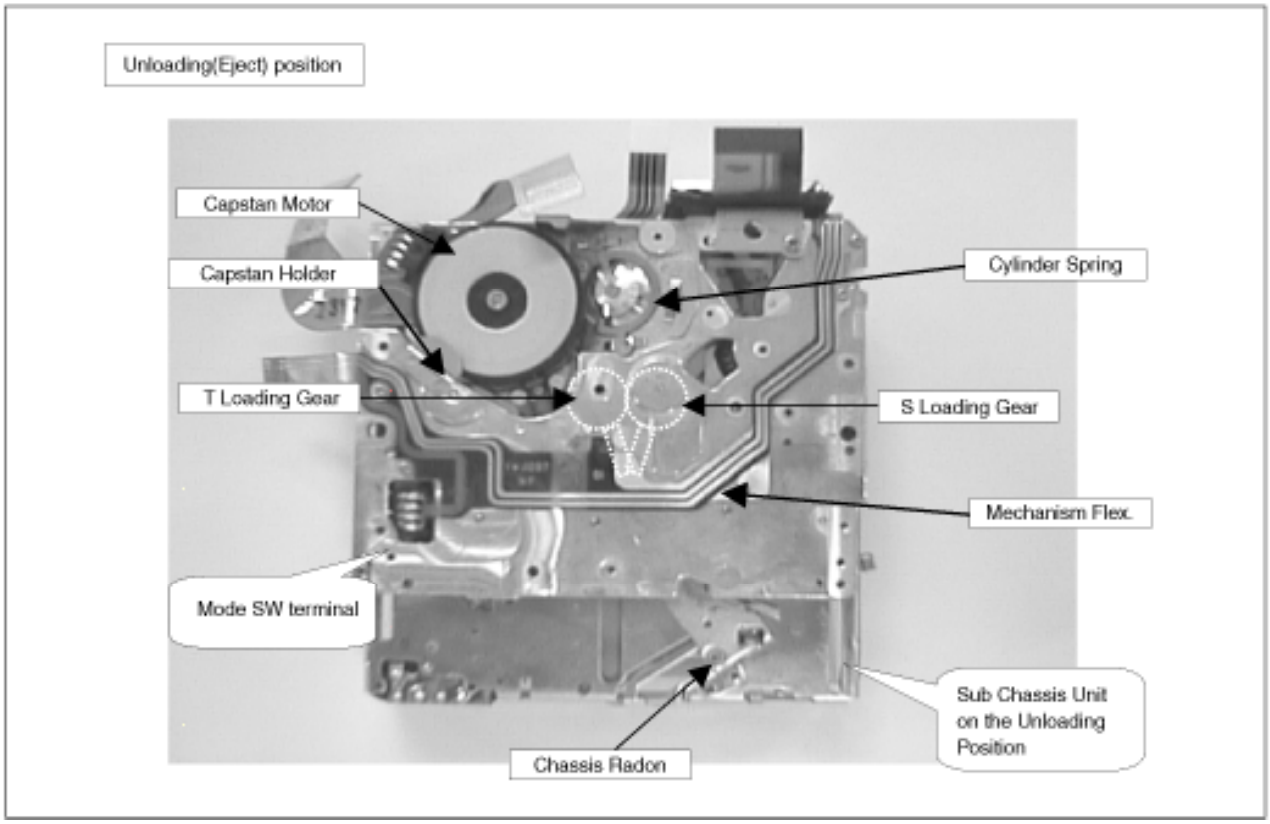
TOP PREVIOUS NEXT



TOP PREVIOUS NEXT

1.2 BOTTOM SIDE

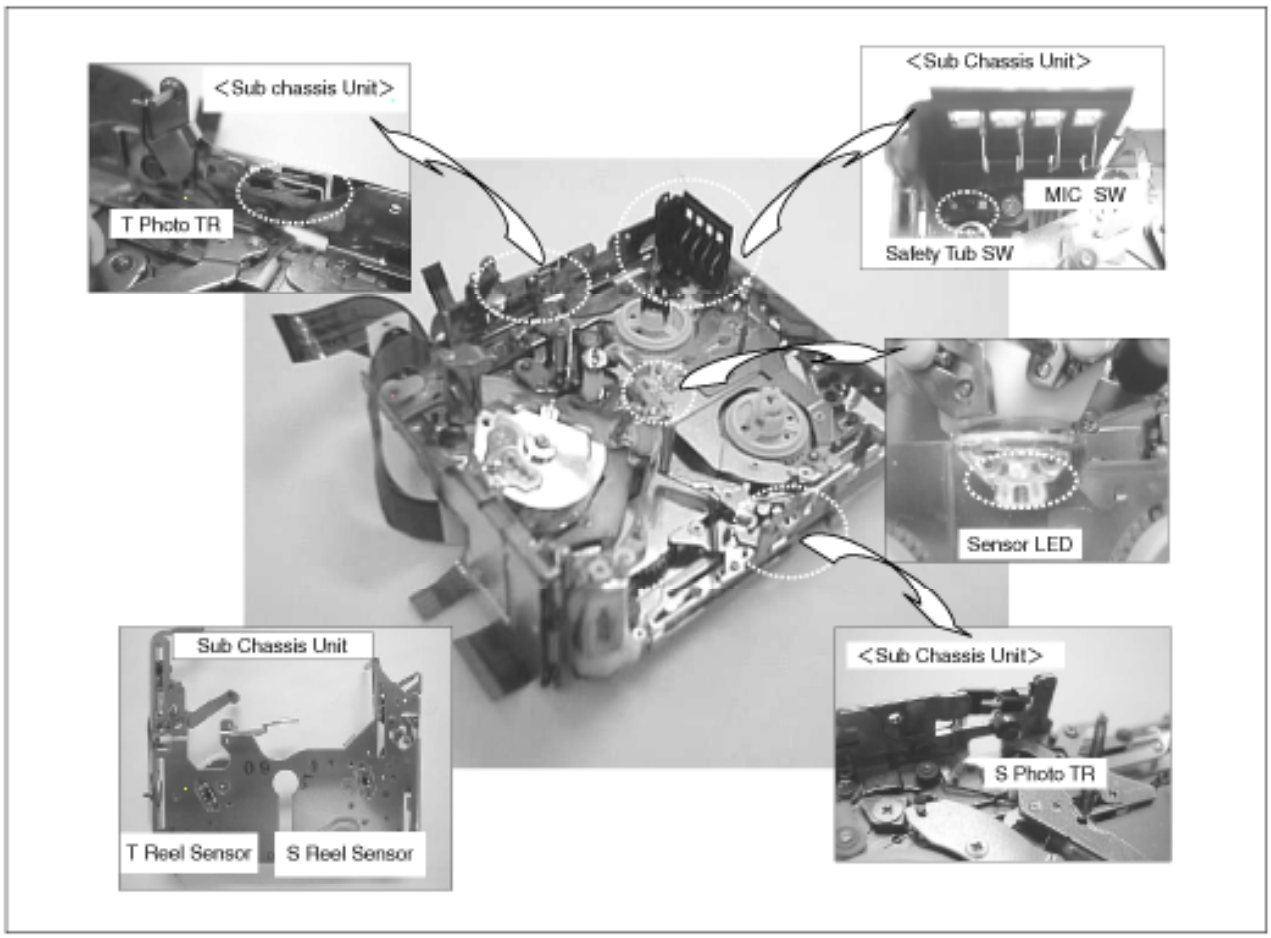
TOP PREVIOUS NEXT



TOP PREVIOUS NEXT

1.3 SENSOR POSITION

TOP PREVIOUS NEXT

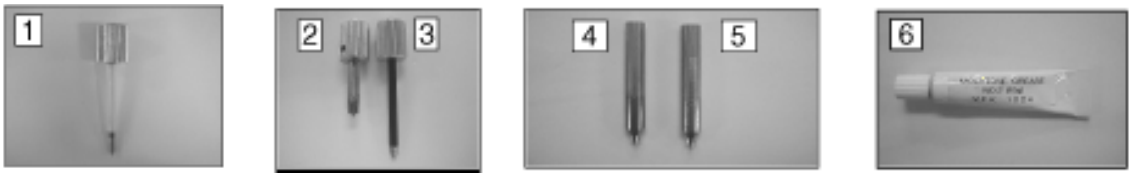


TOP PREVIOUS NEXT

2.1 FIXTURES& TOOLS FOR DISASSEMBLY& ASSEMBLY

TOP PREVIOUS NEXT

No.	Parts number	Parts Name	Q´ty	New	Remarks
1	VFK1390	Precision Driver	1	•	
2	VFK1444	Gear Driver	1	•	
3	VFK1444Q2	Gear Driver for Q2 & Q3mecha.	1	•	
4	VFK1650	Cut Washer Jig(0.86)	1	•	
5	VFK1649	Cut Washer Jig(0.65)	1	•	
6	VFK1024	Molytone Grease	1	•	

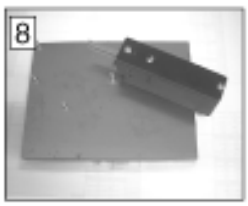


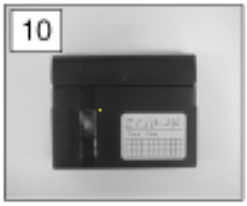
TOP PREVIOUS NEXT

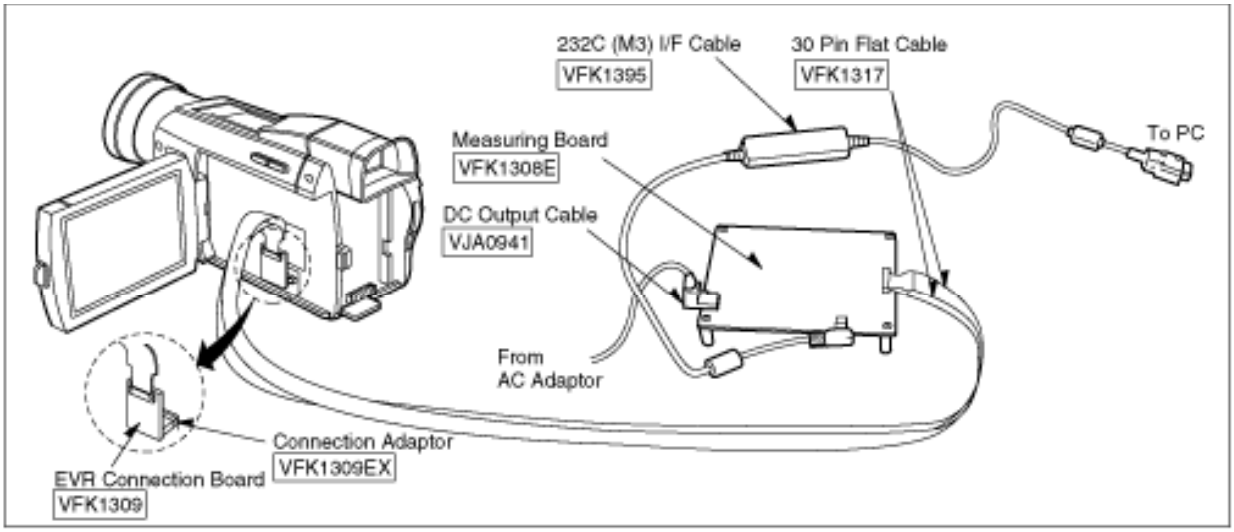
2.2 FIXTURES&TOOLS FOR MECHANICAL ADJUSTMENT

TOP PREVIOUS NEXT

No.	Parts number	Parts Name	Q´ty	New	Remarks
7	VFK1278	Post Adjustment Driver	1	•	
8	VFK1638	Capstan Tilt Adj. Jig	1	•	
9	VFK1641	Envelope Detecor Board	1	•	
10	VFM3110EDS(PAL)	DV Alignment Tape	1	--	or VFM3010EDS(NTSC)
11	VFK1395	232C(M3) I/F Cable	1	--	"TATSUJIN" system
12	VFK1308E	Measuring Board	1	--	"TATSUJIN" system
13	VFK1309	EVR Connecor Board	1	--	"TATSUJIN" system
14	VFK1309EX	Connection Adaptor		--	"TATSUJIN" system
15	VFK1317	30pin Flat Cable	2	--	or VFK1517(New - 300mm) "TATSUJIN" system
16	VJA0941	DC Output Cable	1	--	"TATSUJIN" system







2.3 MAINTENANCE FOR CAPSTAN TILT ADJUSTMENT JIG.

TOP PREVIOUS NEXT

1. Keep applying oil for preventive oxidation on base block.

   Glove should be used when you apply oil.

2. Do not apply pressure to this jig.

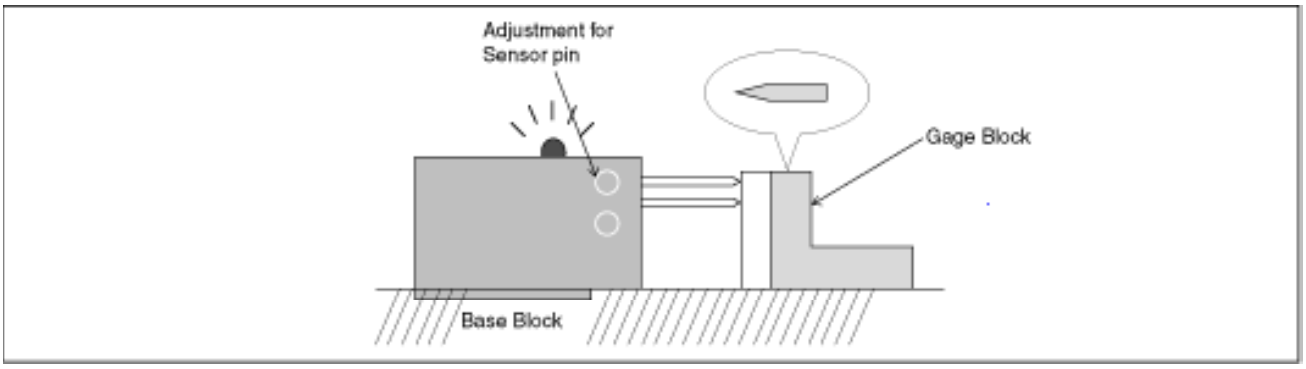
3. If Brightness of LED become weak, Battery (SUM4 X 2) in the top of box should be changed.

4. Inspect sensor pin regularly as following.

   A. Put Gage Block to sensor pin.

   B. Confirm LED is lit.

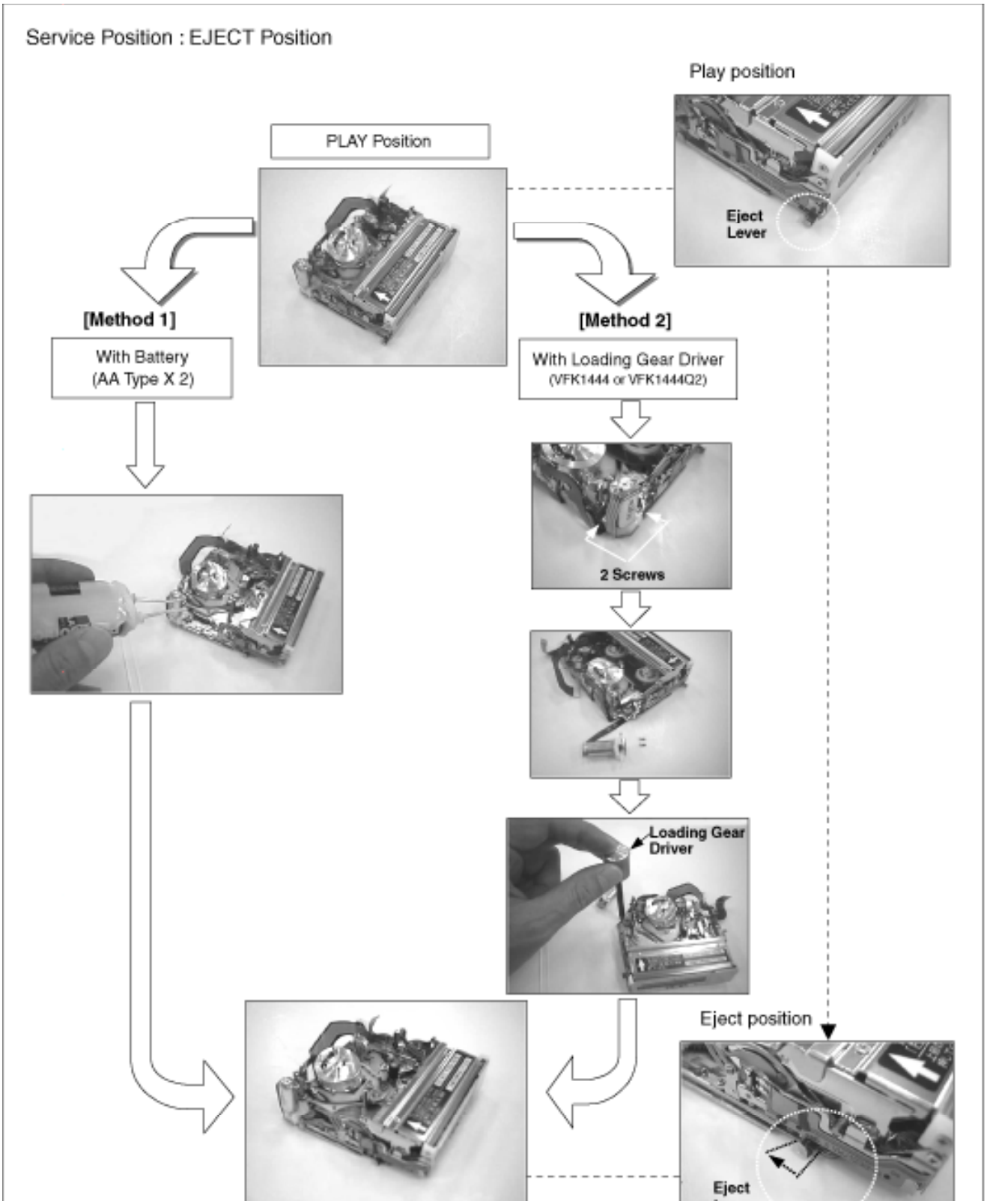
      If not, adjust sensor pin by rotating a screw.

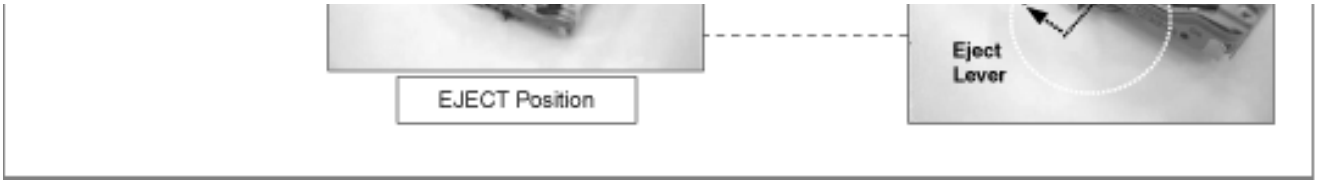


TOP PREVIOUS NEXT

3.1 PREPARATION FOR DISASSEMBLY

TOP PREVIOUS NEXT





TOP PREVIOUS NEXT

3.2 DISASSEMBLY PROCEDURE

TOP PREVIOUS NEXT

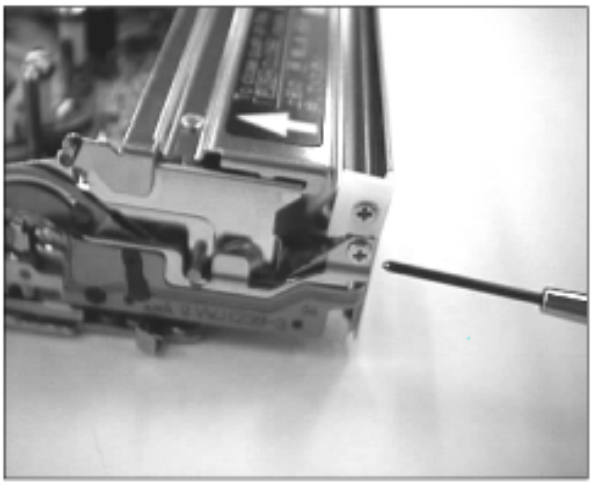
No.	Item	Fig.	Procedure
1	Cassette Up Unit.	Fig. D1-1	1) Remove 3 screws. (Q1 &2 have 4 screws)
		Fig. D1-2	2) Take coupling portion off from both S &T sides.
*2	H Amp Unit./(Only Q1 & Q2)	Fig. D2-1	1) Remove a screw from Shield case.
		Fig. D2-2	2) Take Cylinder Flex. From connector.
		Fig. D2-3	3) Remove a screw from H Amp Angle.
3	Cylinder Unit & RT Flex. Flame.	Fig. D3-1	1) Remove a screw from RT Flex. Flame.
		Fig. D3-2	2) Remove 3 screws and then take Cylinder Spring out.
		Fig. D3-3	3) Remove a screw and take RT Flex. Flame out.
4	LED Holder, Cover plate & Idler U.	Fig. D4-1	1) Pull up and remove LED Holder.
		Fig. D4-2	2) Move LED Flat Cable out of position and unhook 2 springs.
		Fig. D4-3	3) Remove 5 screws and remove Cover Plate & Idler U.
5	Sub Chassis Unit	Fig. D5-1	1) Remove 4 screws.
		Fig. D5-2	2) Remove a screw and unhook a spring from Pinch Arm.
6	Pinch Arm & Center Gear	Fig. D6-1	1) Remove Cut Washer and take Pinch Arm out. 2) Take Center Gear out.
		Fig. D6-2	3) Take Center Gear Spacer out.
7	Rail Unit	Fig. D7-1	1) Make half loading until / Connection Arm comes out.
		Fig. D7-2	2) Disconnect Connection Arms. a) Hold Loading Gear side. b) Disconnect connection arms.
		Fig. D7-3	3) Remove 4 screws.
8	T-Loading Gear & S-Loading Gear	Fig. D8	1) Take T-Loading Gear out. 2) Remove Cut Washer on S-Loading Gear and take S-Loading Gear out. * Removed Cut Washer can not be used again.
9	Gear Cover	Fig. D9	1) Remove a screw and slide Gear Cover to take out.
10	Pinch Beetle & Release Beetle	Fig. D10	1) Remove a washer and take Pinch Beetle and Release Beetle out together.
11	Tension Lever & Eject Arm.	Fig. D11	1) Remove a screw and take Tension Lever out. 2) Remove a washer and take Eject Arm out.
12	Interface Gears	Fig. D12	1) Remove 4 Gears.
13	Cam Gear	Fig. D13	1) Remove Cam Gear.

14	Chassis Radon	Fig. D14	1) Remove a washer.
15	Boat Radon	Fig. D15	1) Remove Boat radon.
16	Drive Gear	Fig. D16	1) Remove Drive Gear and a White Waher underneath.
17	Capstan Holder & Capstan Motor	Fig. D17-1	1) Remove 2 screws and take Capstan Holder out. * It is not necessary to remove 2 screws for New Capstan Holder. Because it shapes screw.
		Fig. D17-2	2) Remove 3 screws and take Capstan Motor out downword.
18	Loading Motor unit & Mechanism Interface Flex.	Fig. D18-1	1) Remove 2 screws and take Loading Motor Unit out.
		Fig. D18-2	2) Remove 4 screws and dissolder at Mode Sw.
*19	Mode Switch , Deceleration Gears & Tension Plate.	Fig. D19	1) Take Mode Sw out. 2) Remove a washer and take Deceleration Gear (A) out. 3) Take Deceleration Gear (B) out. 4) Remove 2 washers and take Tension Plate.
*20	T4 Guide , Eject Lever , Pulley Cover & Pulley.	Fig. D20-1	1) Remove a screw and take T4 Guide out.
		Fig. D20-2	2) Remove a washer and take Eject Lever out.
		Fig. D20-3	3) Remove 2 screw and take Pulley Cover out. 4) Take Pulley out.
*21	S3 Base U.	Fig. D21	1) Remove a screw for S3 adjustment and take S3 Base U.

* 1) Procedure 2 for H.Amp Unit is applied only Q1 & Q2 / mechanism. 2) Procedure 19 - 21 can be changed in order.

Fig. D1-1

1/3 (Left)
* Lower one



2/3 (Front)
* Q1 & Q2 : 2screws

3/3 (Right)
* Lower one

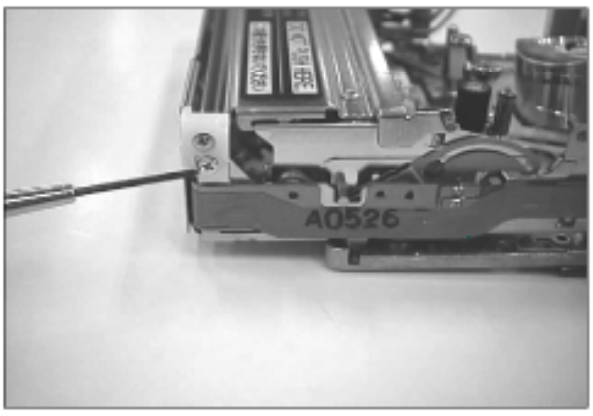


Fig. D1-2

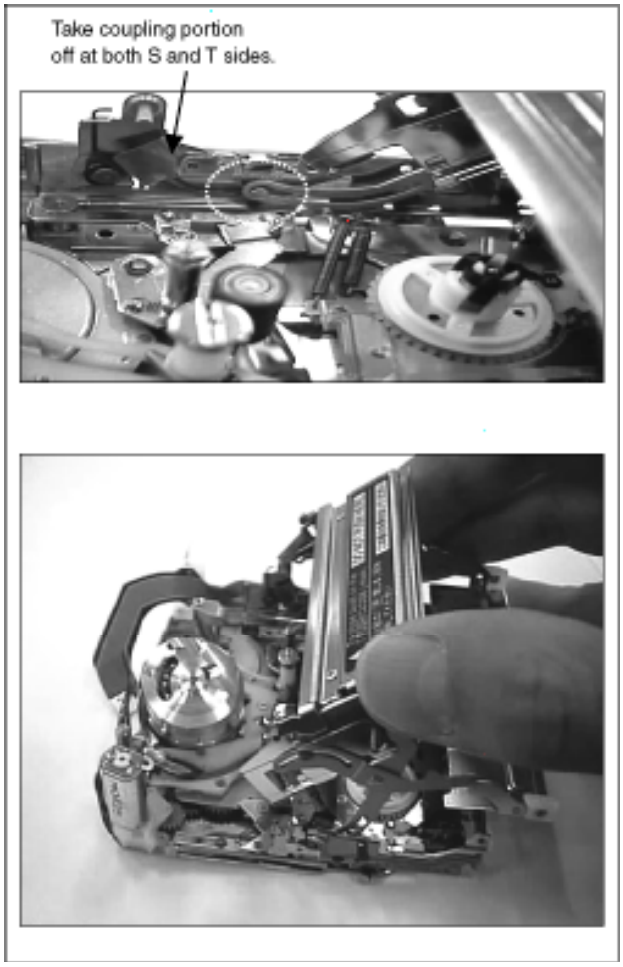


Fig. D2-1

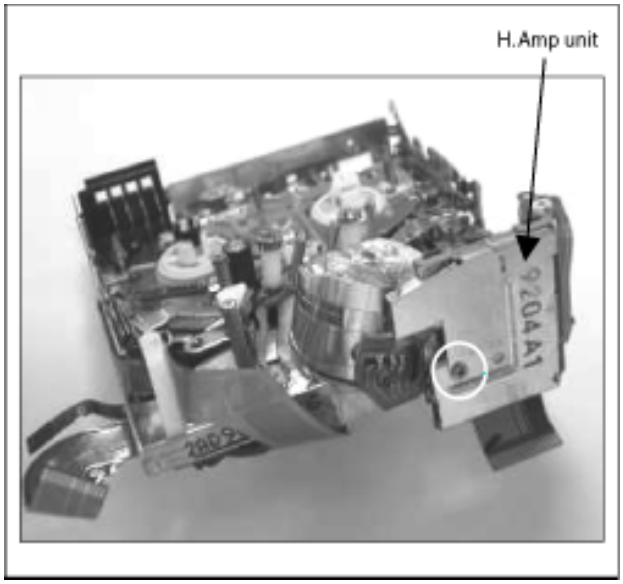


Fig. D2-2

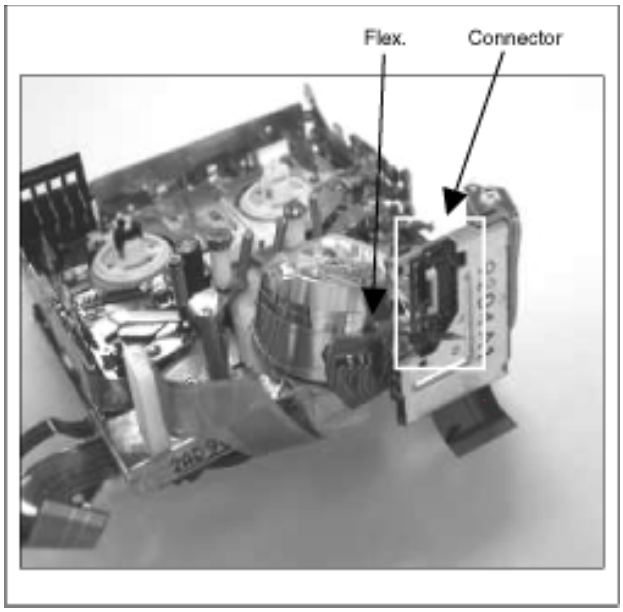


Fig. D2-3

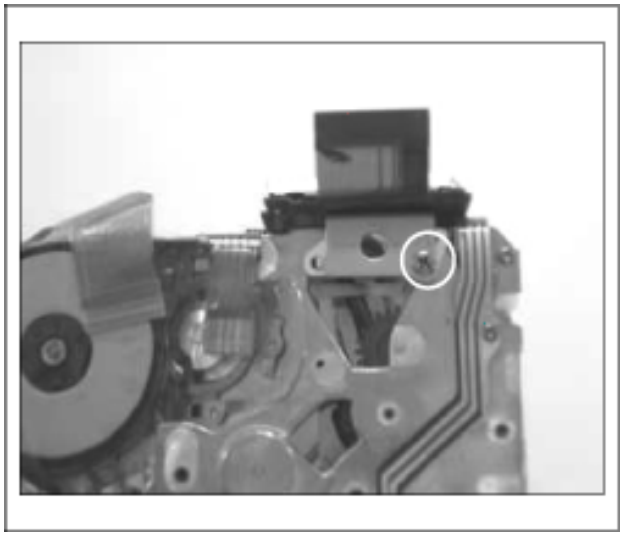


Fig. D3-1

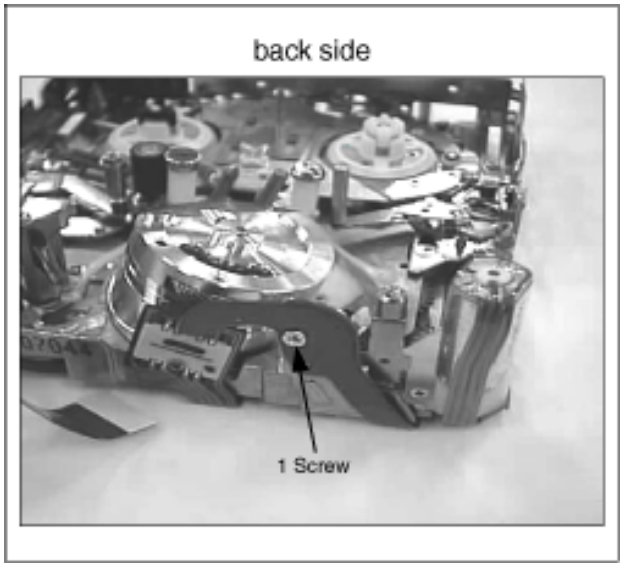


Fig. D3-2

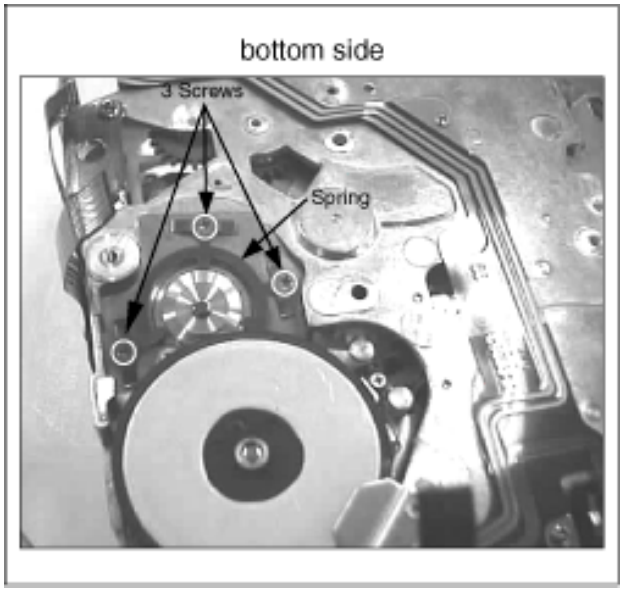


Fig. D3-3

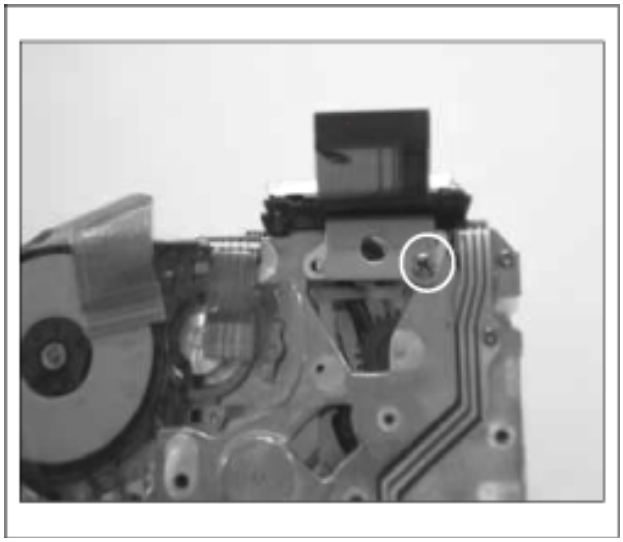


Fig. D4-1

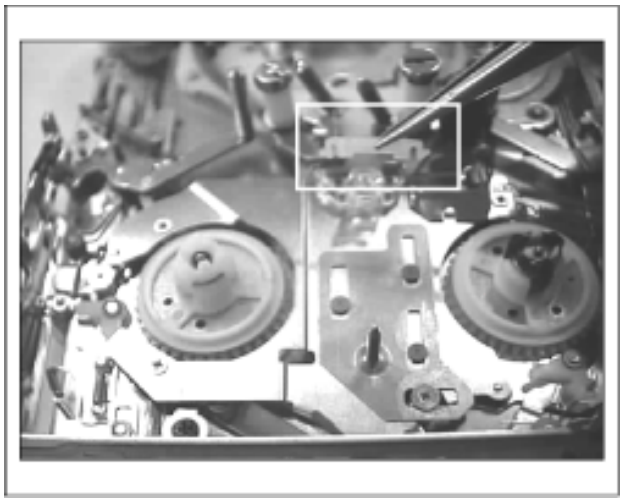


Fig. D4-2

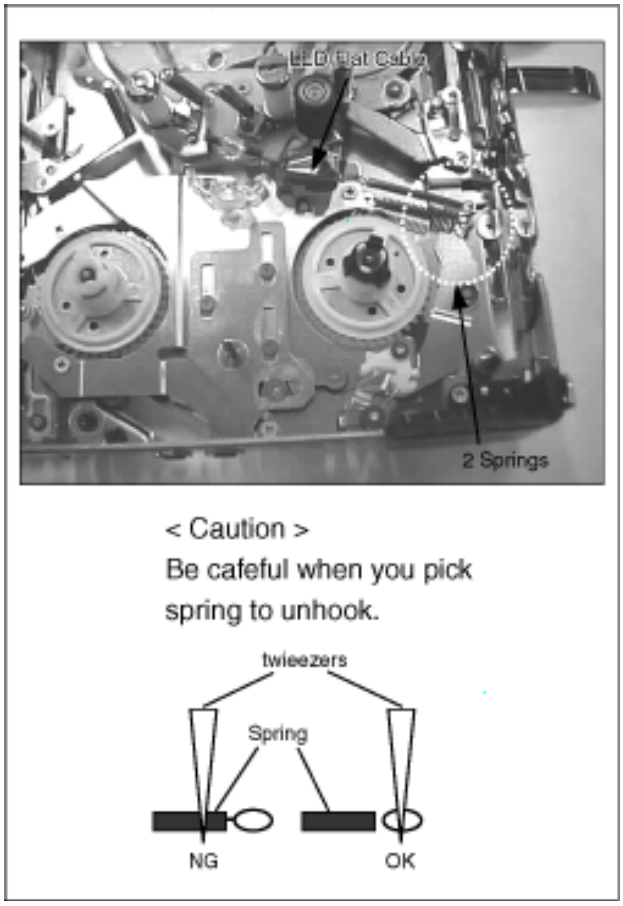

LED Flat Cable
2 Springs
< Caution >
Be cafeful when you pick
spring to unhook.
twieezers
Spring
NG
OK

Fig. D4-3

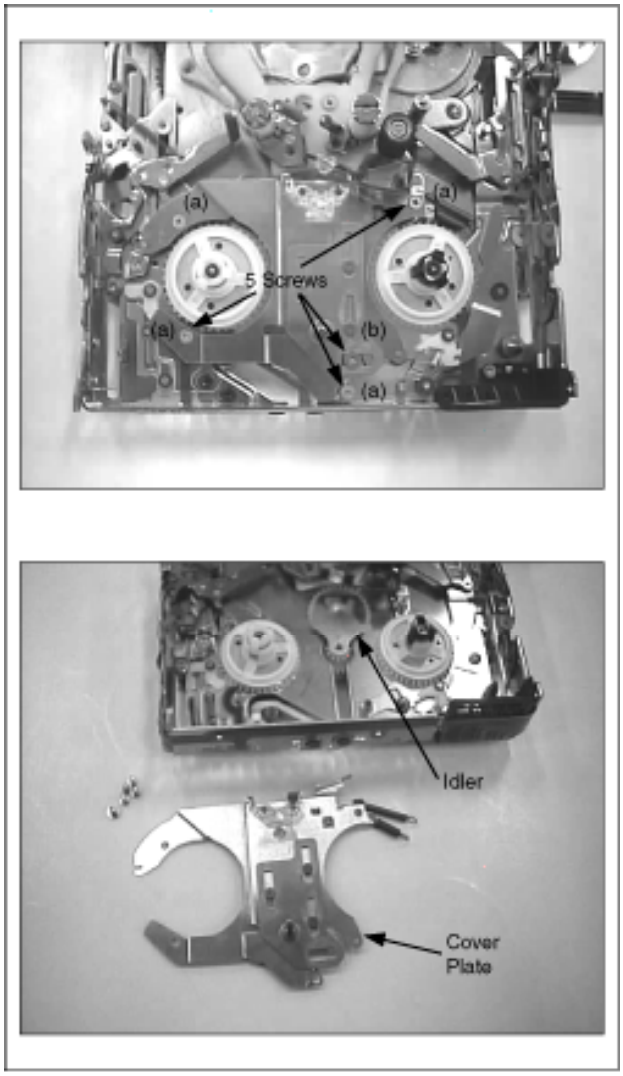
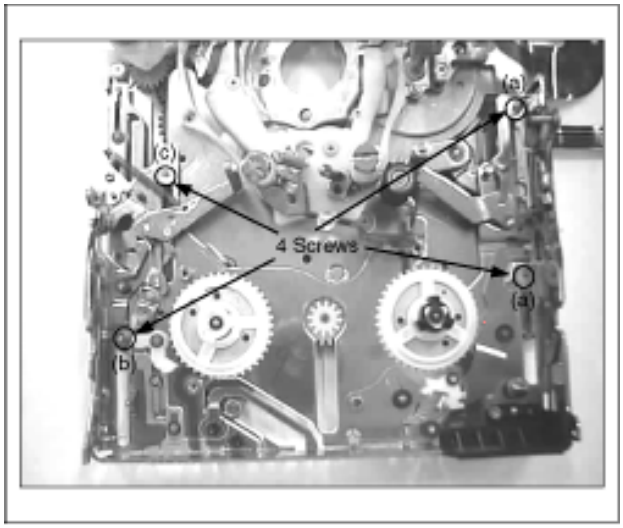


Fig. D5-1



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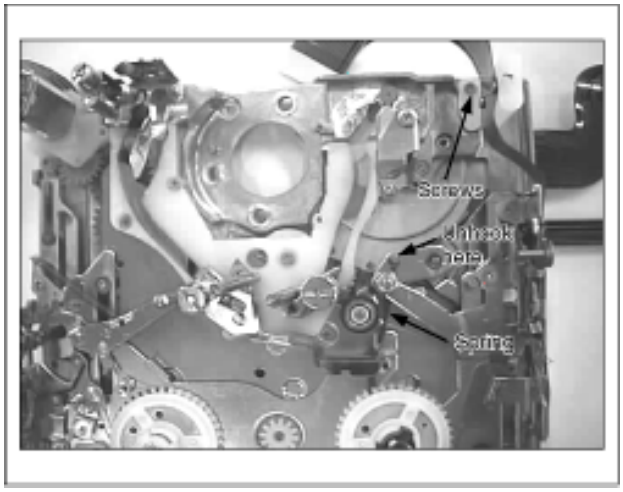

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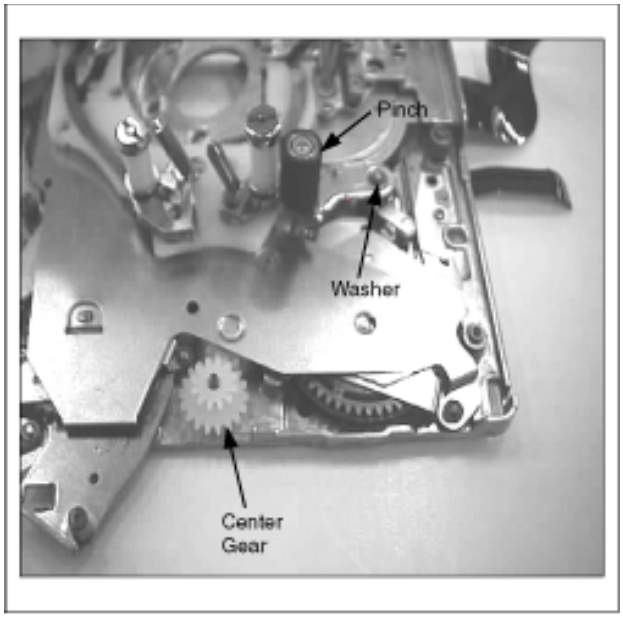


Fig. D6-2

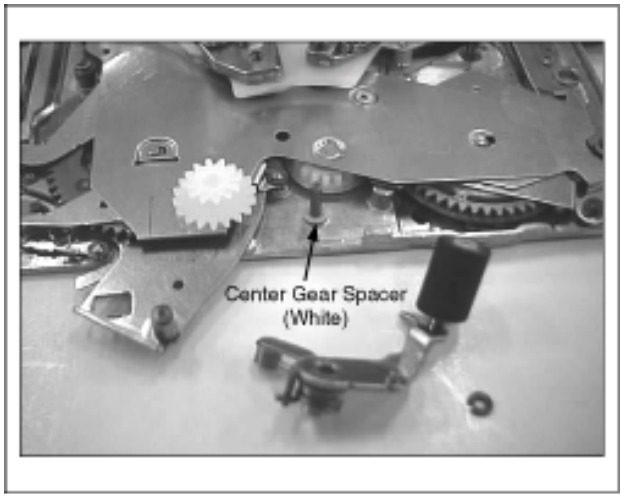


Fig. D7-1

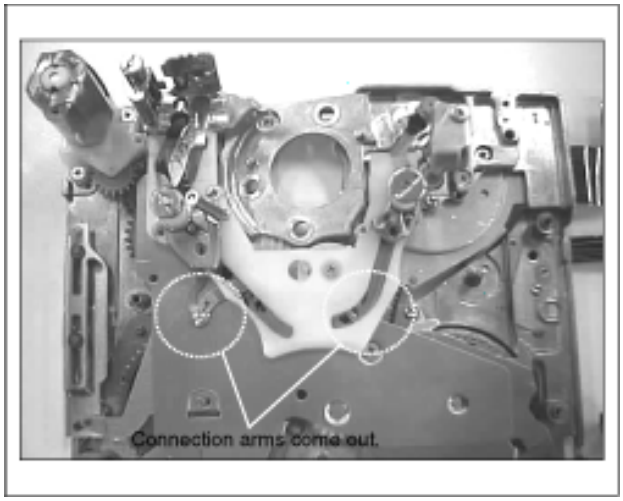


Fig. D7-2

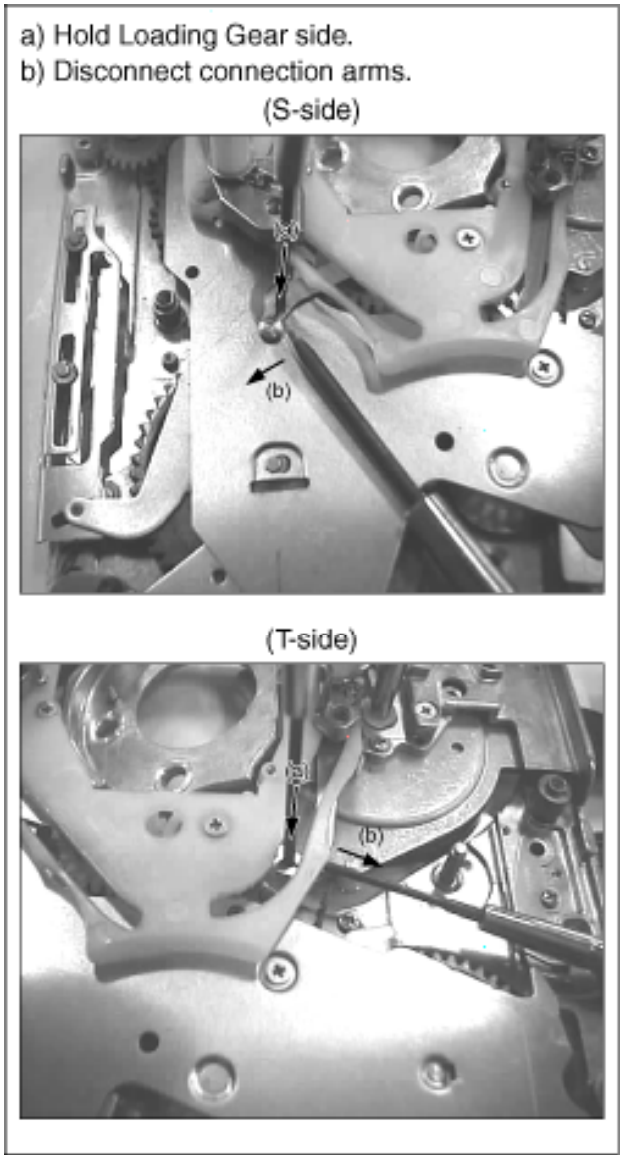

a) Hold Loading Gear side.
b) Disconnect connection arms.
(S-side)
(a)
(b)
(T-side)
(a)
(b)

Fig. D7-3

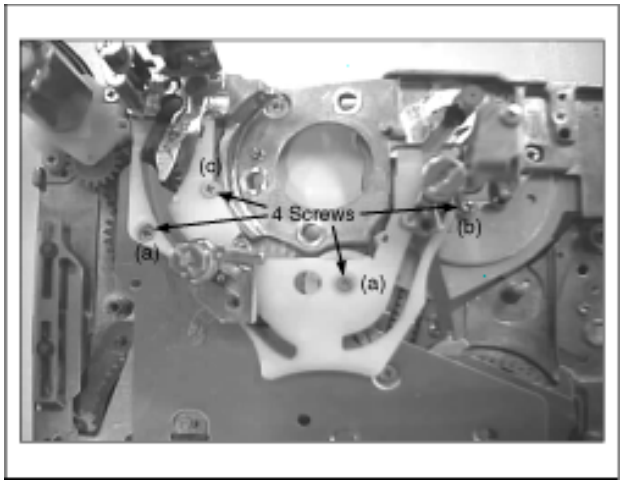

(c)
4 Screws
(b)
(a)
(a)

Fig. D8

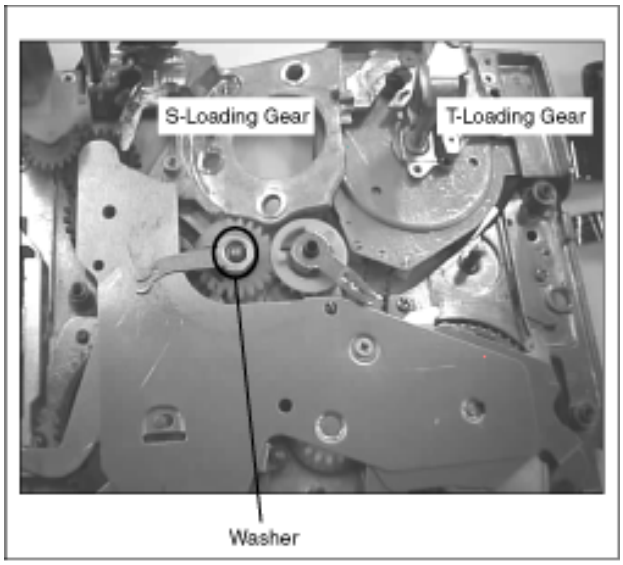


Fig. D9

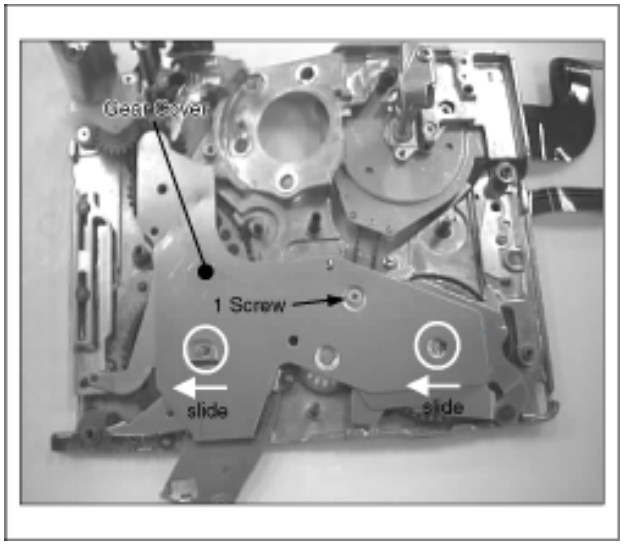


Fig. D10

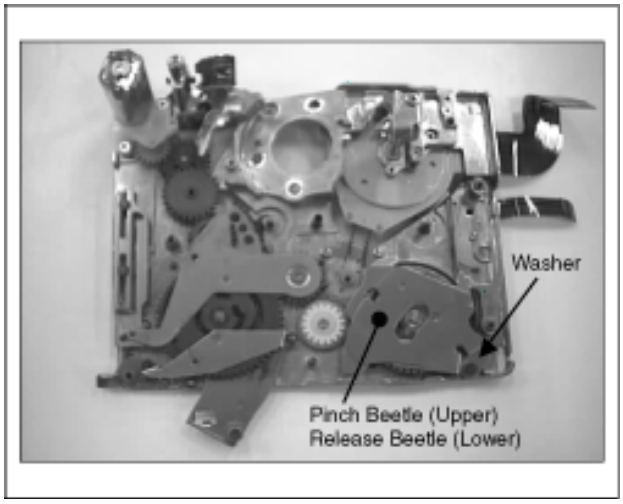


Fig. D11

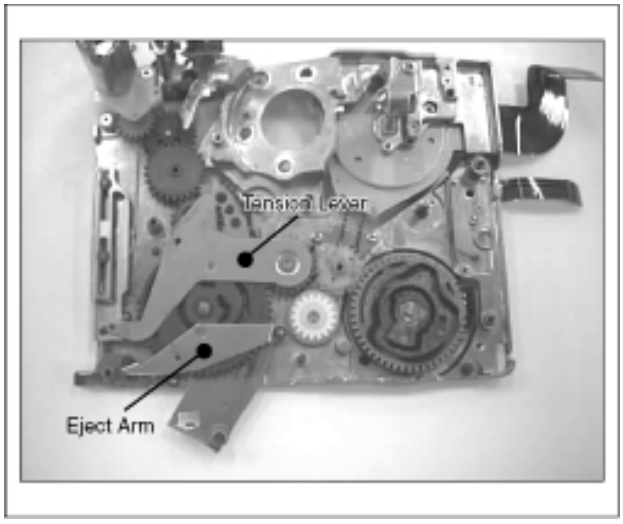


Fig. D12

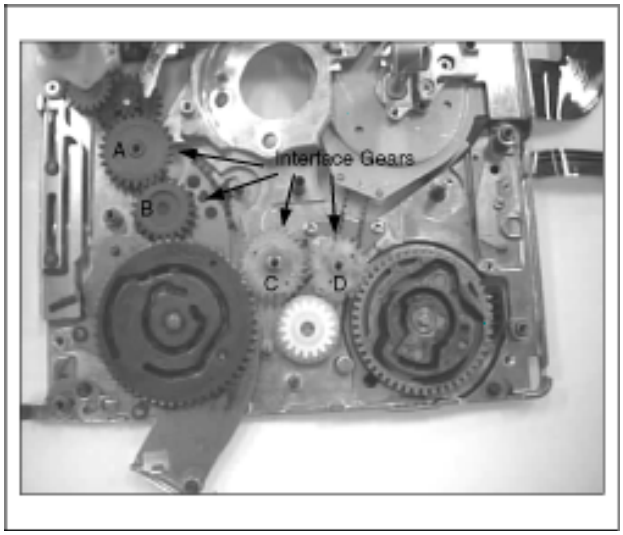


Fig. D13

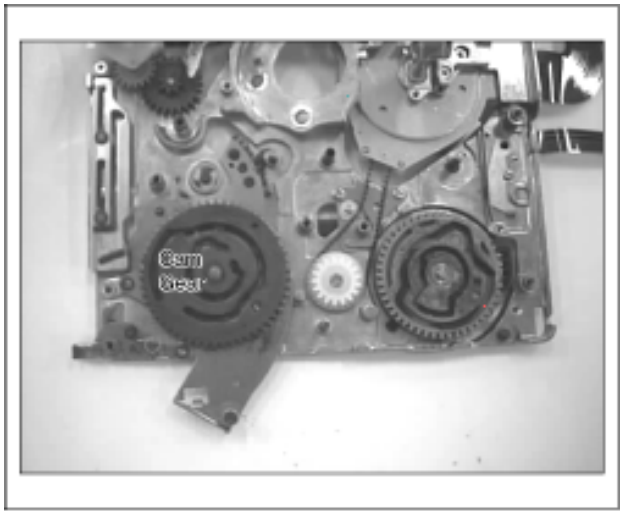
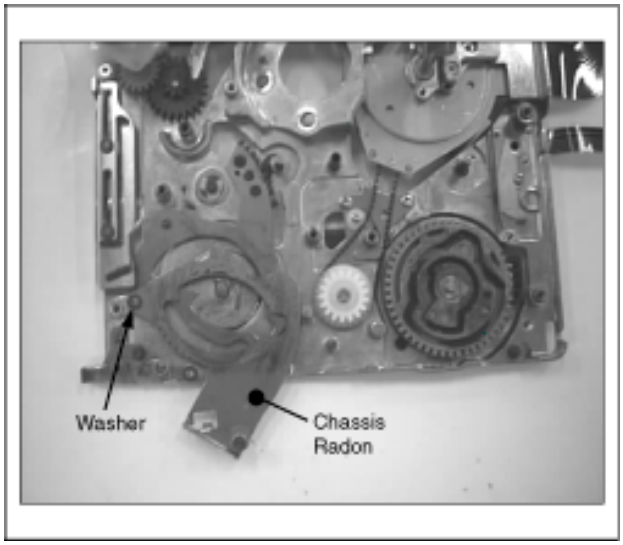


Fig. D14



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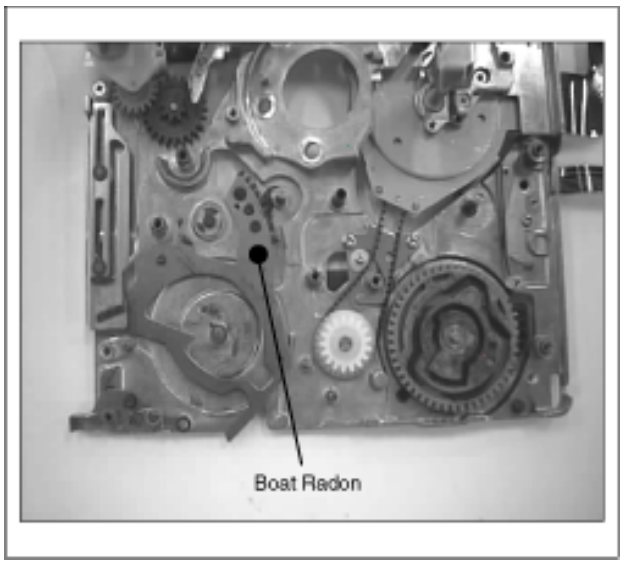


Fig. D16

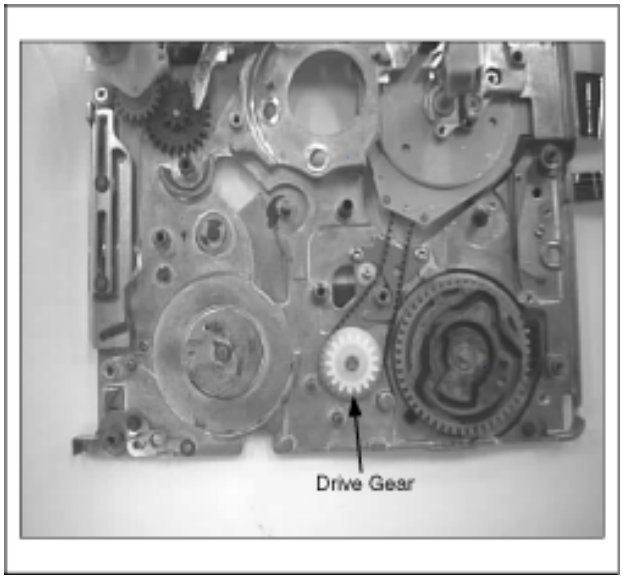


Fig. D17-1

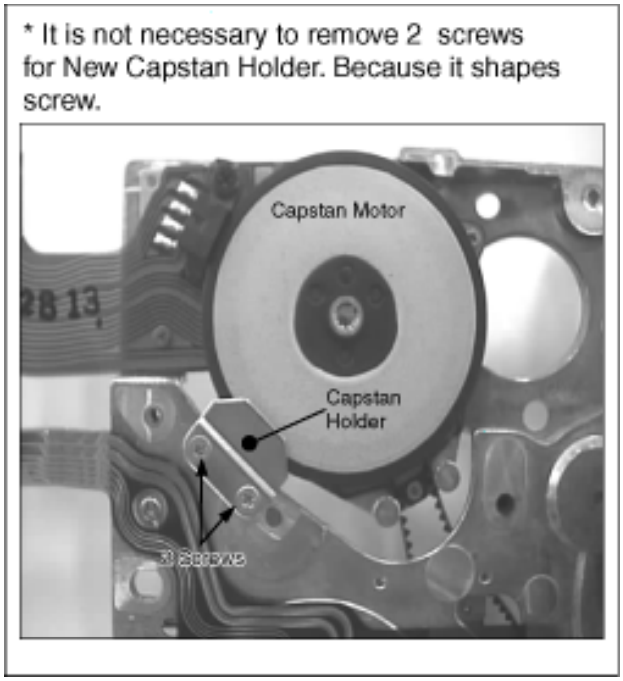
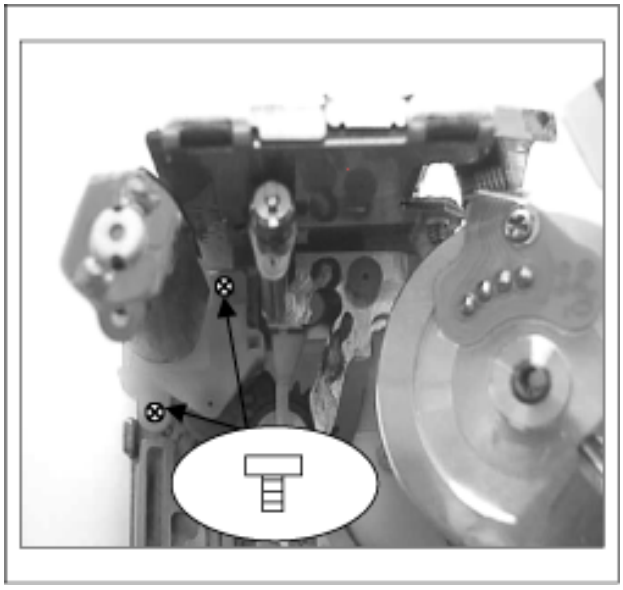


Fig. D17-2

Fig. D18-1



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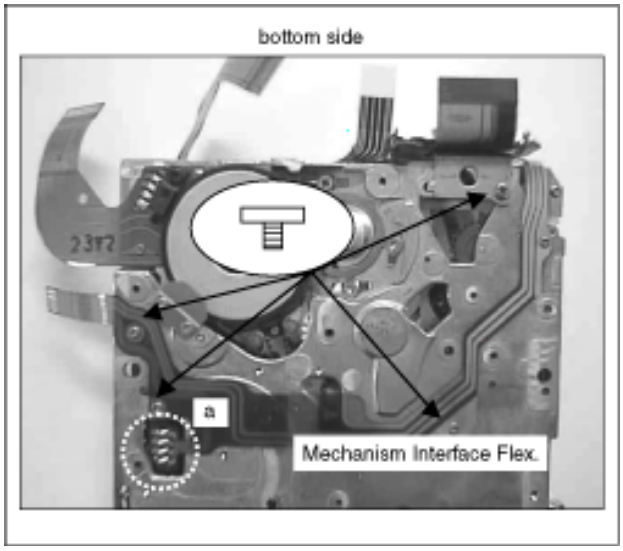
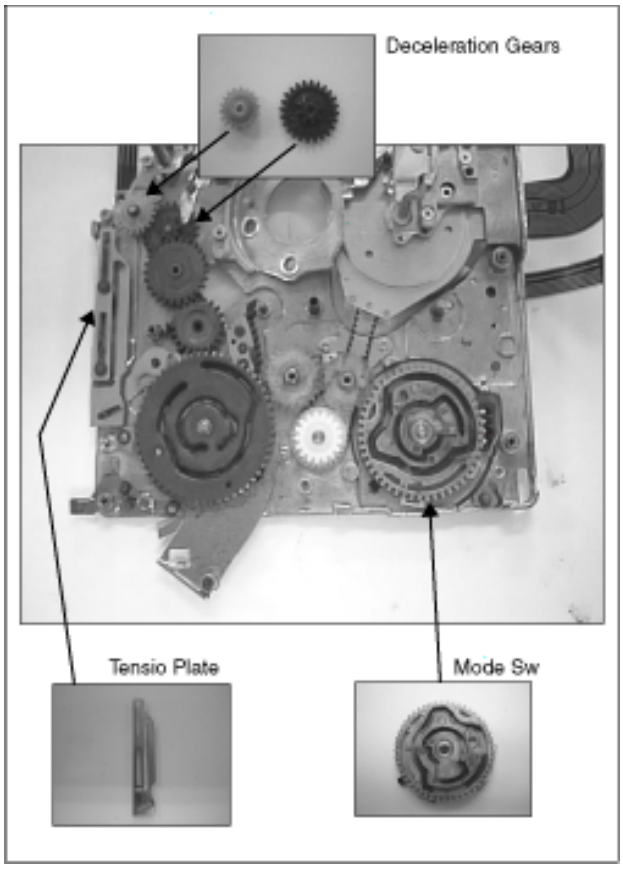


Fig. D19



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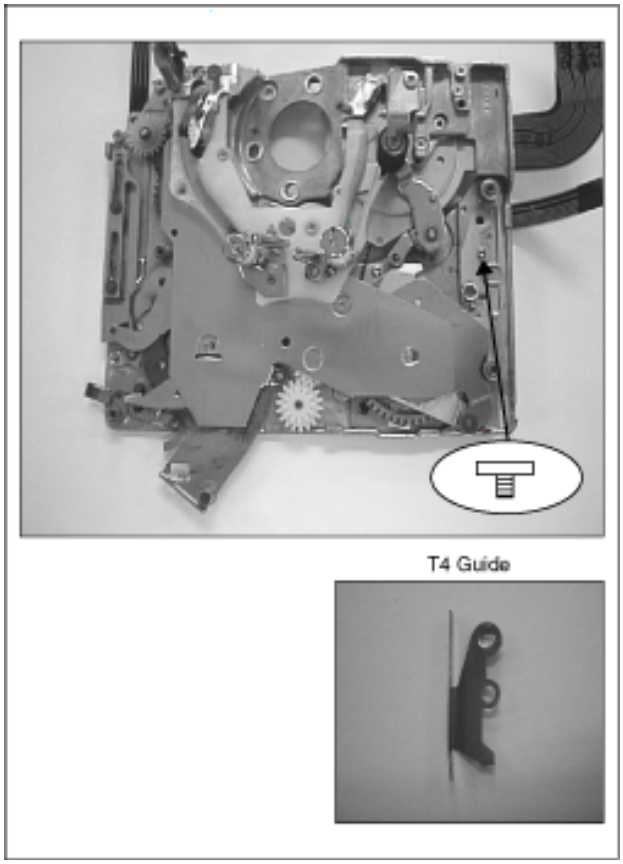

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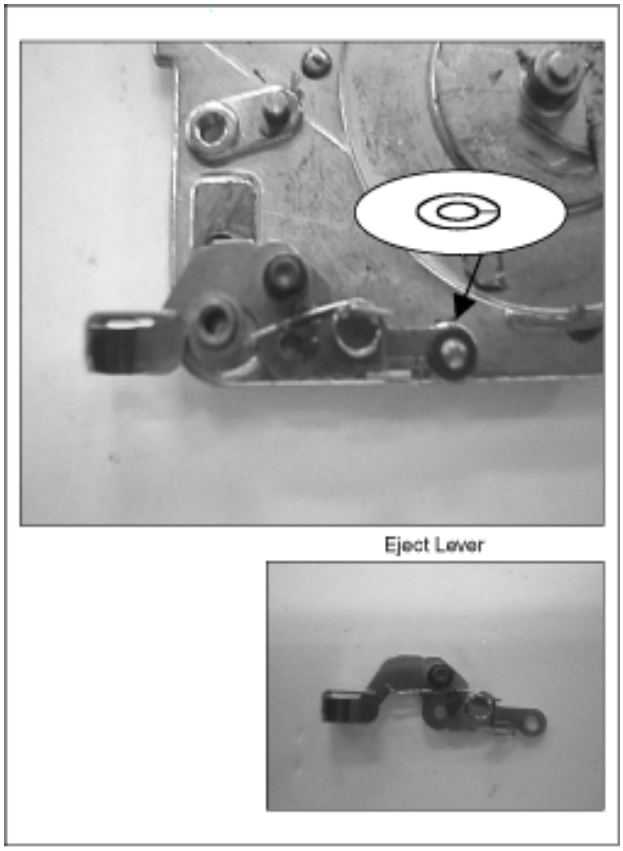

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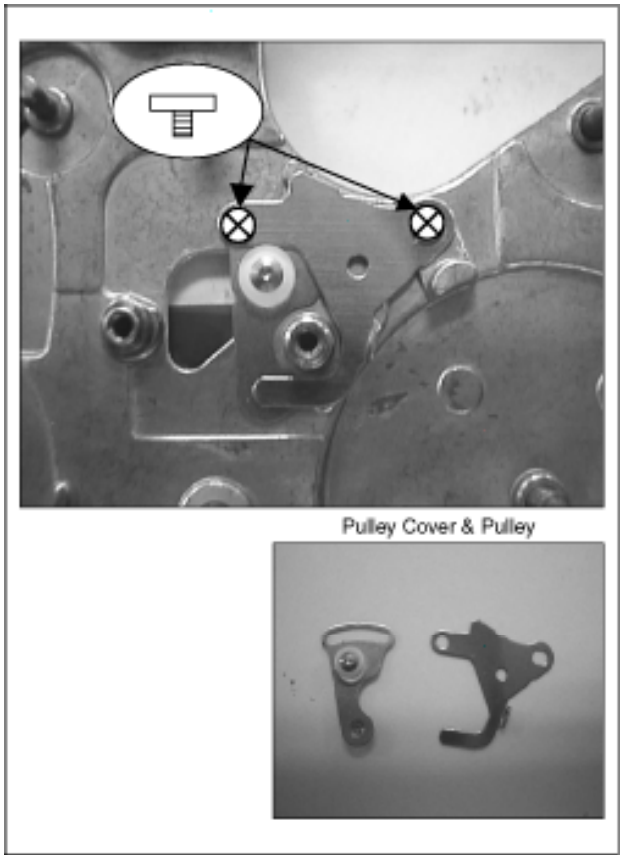
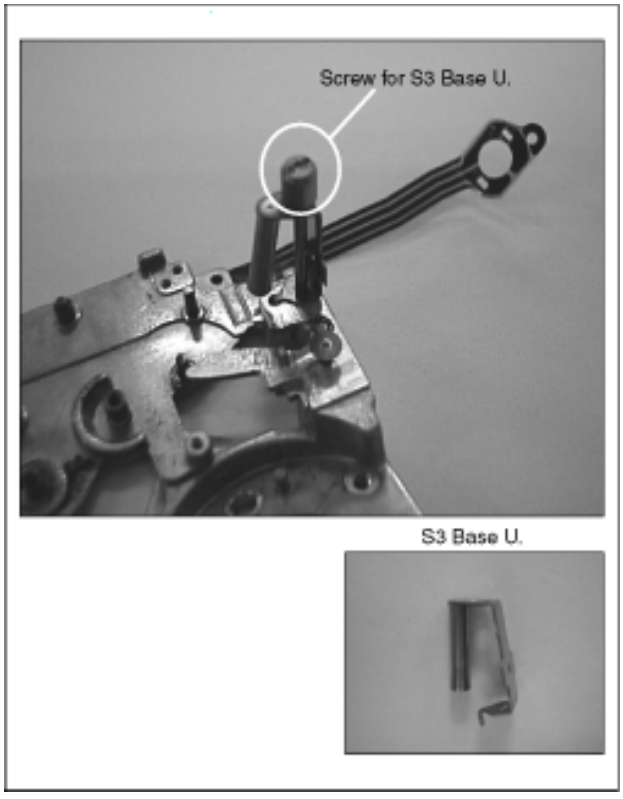


Fig. D21



4.1 ASSEMBLY PROCEDURE

TOP PREVIOUS NEXT

* 1) Procedure 20 for H.Amp Unit is applied only Q1 & Q2 mechanism.

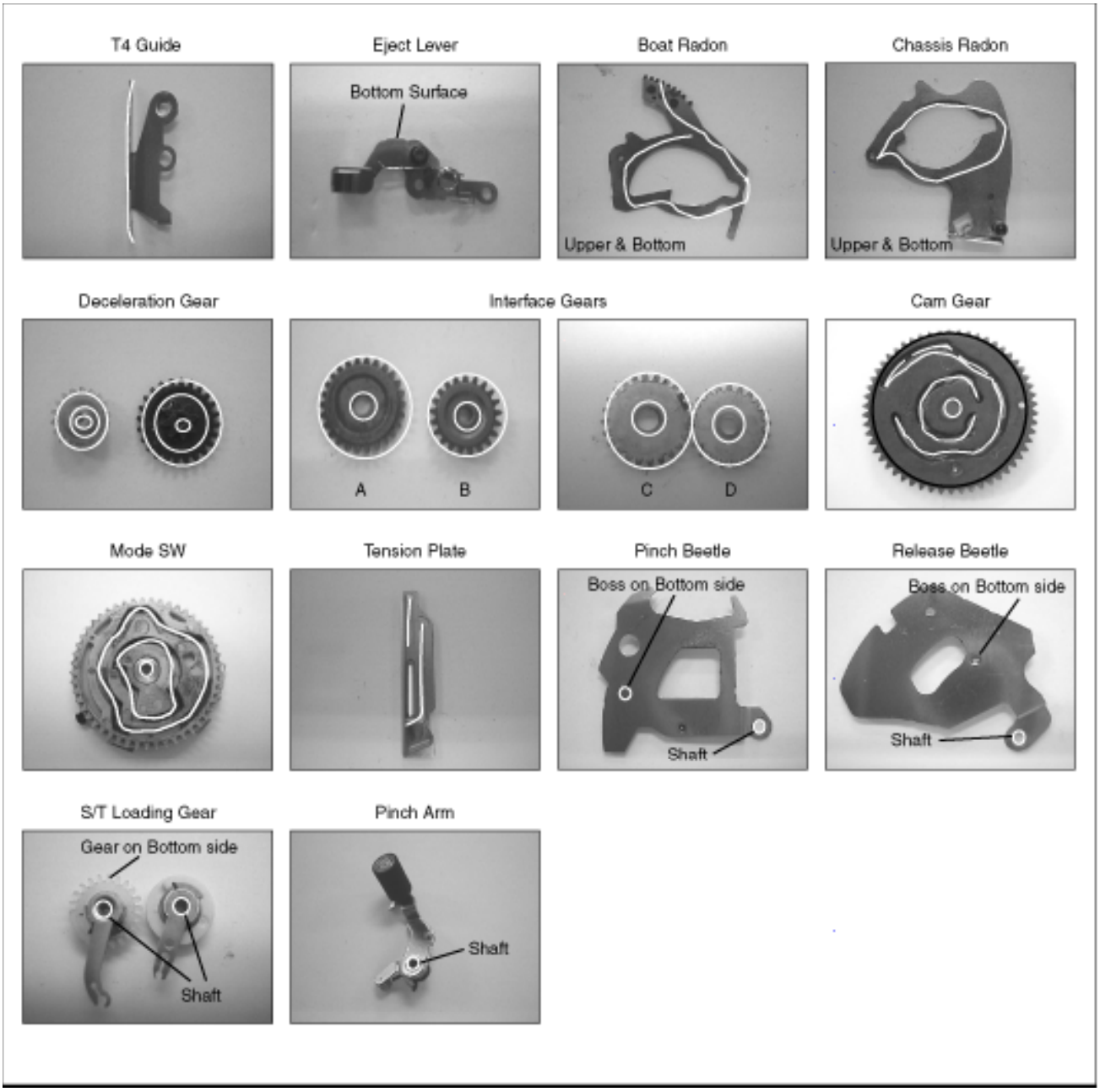
2) Procedure 1 - 3 can be changed in order.

No.	Item	Fig.	Grease	Procedure
*1	S3 Base U.	Fig. A1	--	1) Put S3 Base U on and tighten a screw.
*2	T4 Guide , Eject Lever, Pulley Cover & Pulley.	Fig. A2-1	•	1) Put hole of T4 Guide to hole of chassis and tighten a screw.
		Fig. A2-2	•	2) Put Eject Lever on and a washer.
		Fig. A2-3	--	3) Put boss of Pulley to hole of chassis on. Hole of chassis under pulley should be visible through slit of Pulley.
		Fig. A2-4	--	4) Put Pulley Cover on Pulley and tighten 2 screws.
*3	Mode Switch , Deceleration Gears & Tension Plate.	Fig. A3	•	1) Put Mode Sw on.
			•	2) Put Deceleration Gear (B) on
			•	3) Put Deceleration Gear (A) on and a washer.
			•	4) Put Tension Plate on and 2 washers.
4	Loading Motor unit & Mechanism Interface Flex.	Fig. A4	--	1) Put Loading Motor Unit on and tighten 2 screws.
			--	2) Put Mechanism Interface Flex on and tighten 4 screws. After that, solder at terminal of Mode Sw.
5	Capstan Holder & Capstan Motor	Fig. A5-1	--	1) Put Capstan Motor on and tighten 3 screws. Timing Belt should be between Pulley and boss.
		Fig. A5-2	--	2) Put Capstan Holder on and tighten 2 screws.
6	Drive Gear	Fig. A6	--	1) Put a washer to shaft and install Drive Gear. Timing Belt should be wound around Drive Gear. After that, confirm Timing Belt and Gear are rotated together.
7	Boat Radon	Fig. A7	•	1) Put hole of Boat radon to shaft of chassis.
8	Chassis Radon	Fig. A8	•	1) Put Chassis Radon and a washer on.
9	Cam Gear	Fig. A9	•	1) Put Cam Gear on. Phase Mark should be in the same line with chassis of shaft..
10	Interface Gears	Fig. A10-1	•	1) Put Interface Gear(C) & (D). Each phase mark should be in the same line.
		Fig. A10-2	•	2) Put Interface Gear(A) & (B) on.
11	Tension Lever & Eject Arm.	Fig. A11	--	1) Put boss of Tension Lever into slit of Cam Gear and Tension Plate, then tighten a screw.

				2) Put boss of Eject Arm into slit of Cam Gear. Put a washer on shaft of chassis.
12	Pinch Beetle & Release Beetle	Fig. A12	•	1) Put boss of Pinch Beetle into slit of Mode Sw.
				2) Put boss of Release Beetle into slit of Mode Sw.
				3) Put a washer on.
13	Gear Cover	Fig. A13	--	1) Keep sliding Gear Cover and put it on.
				2) Tighten a screw.
14	T-Loading Gear & S-Loading Gear	Fig. A14	•	1) Put S-Loading Gear on.
				2) Put T-Loading Gear on. Each phase mark should be in the same line.
15	Rail Unit	Fig. A15-1	--	1) Make half loading until Connection Arm comes out.
		Fig. A15-2	--	2) Connect Arm of S & T Loading Gear and Connection Arms. a) Hold Loading Gear side. b) Push Arm of S & Tloading Gear into slit of connection arms.
		Fig. A15-3	--	3) Tighten 4 screws.
16	Pinch Arm & Center Gear	Fig. A16-1	--	1) Put Center Gear Spacer on shaft of chassis.
				2) Put Center Gear on.
		Fig. A16-2	•	3) Make full loading position and put Pinch arm on, then put a washer on.
17	Sub Chassis Unit	Fig. A17-1	--	1) Make unloading position until moving Release Beetle Confirm spring is exist.
		Fig. A17-2		2) Put Sub Chassis Unit on as pre-installation.
		Fig. A17-3		3) Tighten 3 screws. Make Loading position until 1 screw position appears, then tighten a screw.
		Fig. A17-4		4) Tighten a screws at Flex Holder portion and Hook spring back to Pinch Arm.
18	LED Holder, Cover plate & Idler U.	Fig. A18-1	--	1) Put Idler U into shaft of Drive Gear.
		Fig. A18-2	--	2) Put Cover Plate on and tighten 5 screws, then hook 2 springs to 2hooking portion of Sub chassis. And also put LED Flat Cable back.
		Fig. A18-3		3) Put LED Holder back.
19	Confirmation of Mechanism movement , Cylinder Unit & RT Flex. Flame.	Fig. A19-1	--	1) Confirm loading and unloading is smooth.
		Fig. A19-2	--	2) Put Cylinder Unit & Spring on and tighten 3 screws.
		FIg. A19-3	--	3) Put RT Flex. Flame on and tighten 2 screws.
*20	H Amp Unit. (Only Q1 & Q2)	Fig. A20-1	--	1) Put H Amp Unit on and tighten a screw at bottom of chassis.
		Fig. A20-2		2) Connect Cylinder Flex to connector.

		Fig. A20-3		3) Put Shield case on and tighten a screw.
21	Cassette Up Unit.	Fig. A21-1	--	1) Put both S &T sides to coupling portion on.
		Fig. A21-2		2) Tighten 3 screws. (Q1 &2 have 4 screws)

The following parts should be applied Molyton Grease (VFK1024).



How to use washer jigs.

No.	Item	Fig.	Procedure

1	Washer Jigs	Fig. W1-1	1) Each Washers.
2		Fig. W1-2	1) Put a washer on tip of Jig.
3		Fig. W1-3	1) Put Jig on shaft.
4		Fig. W1-4	1) Put a washer on shaft by pressing Jig.

Fig. W1-1

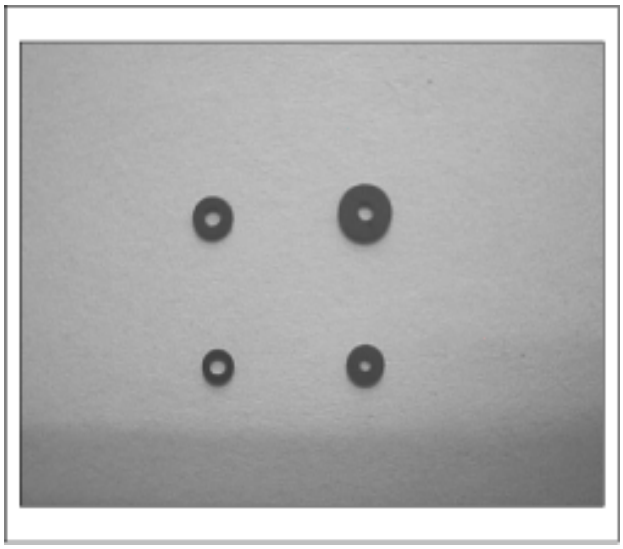


Fig. W1-2

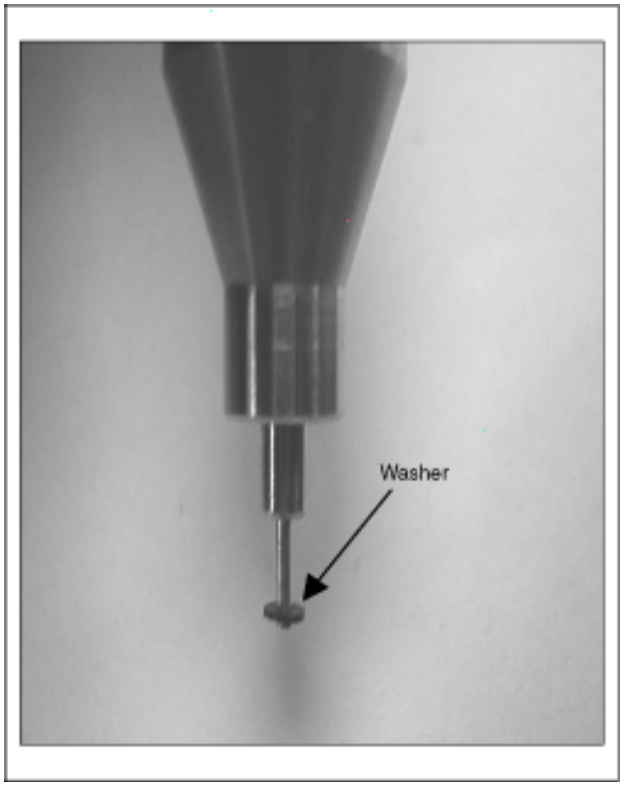


Fig. W1-3

Fig. W1-4

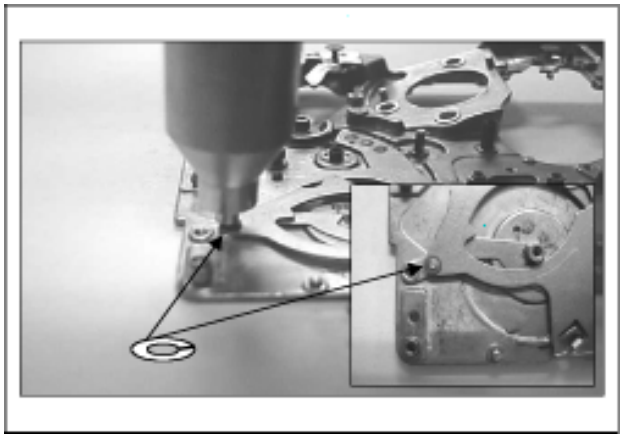


Fig. A1

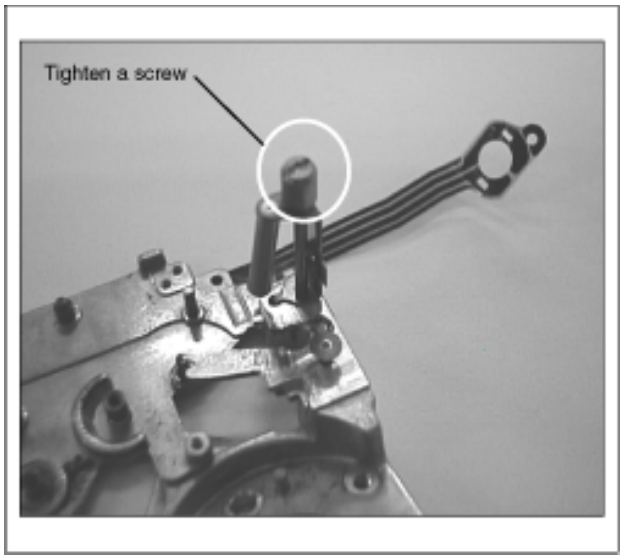


Fig. A2-1

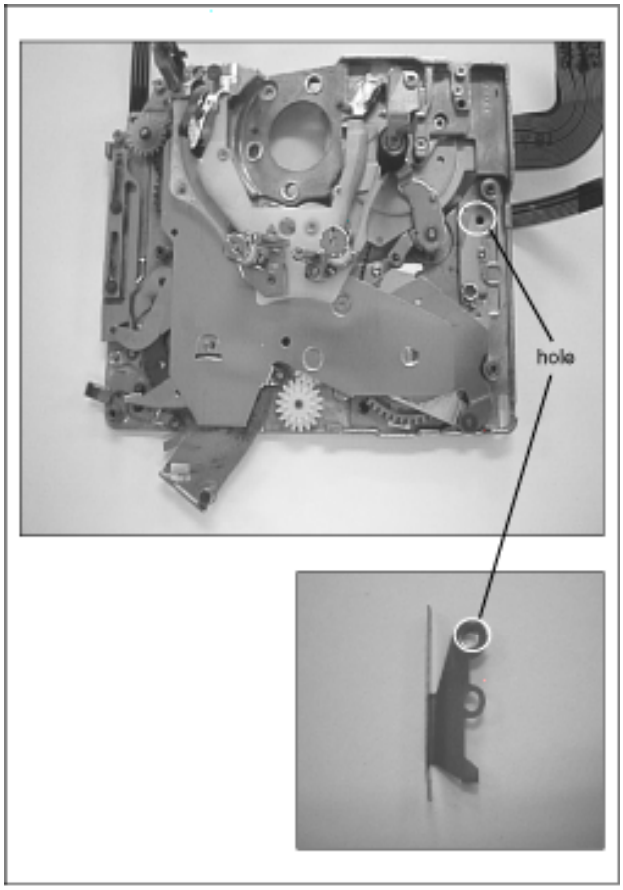


Fig. A2-2

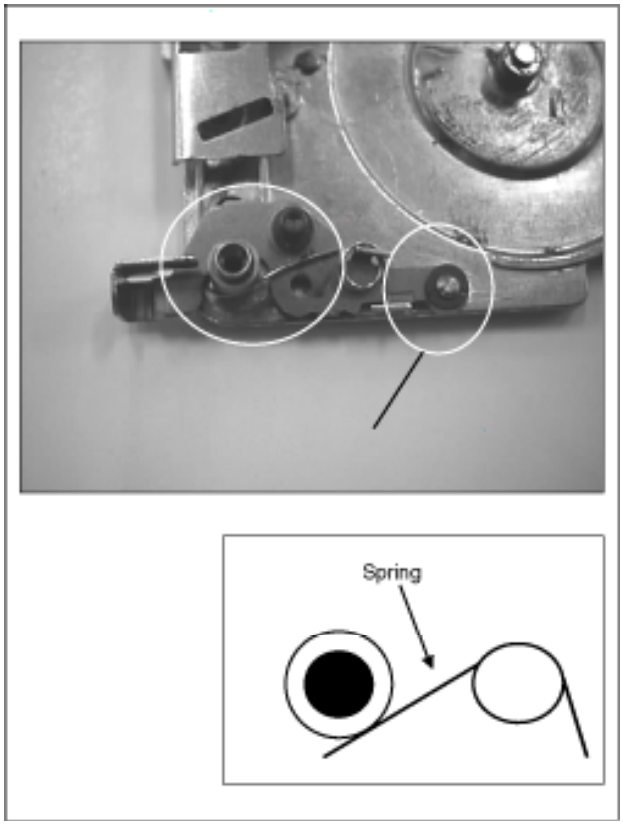


Fig. A2-3

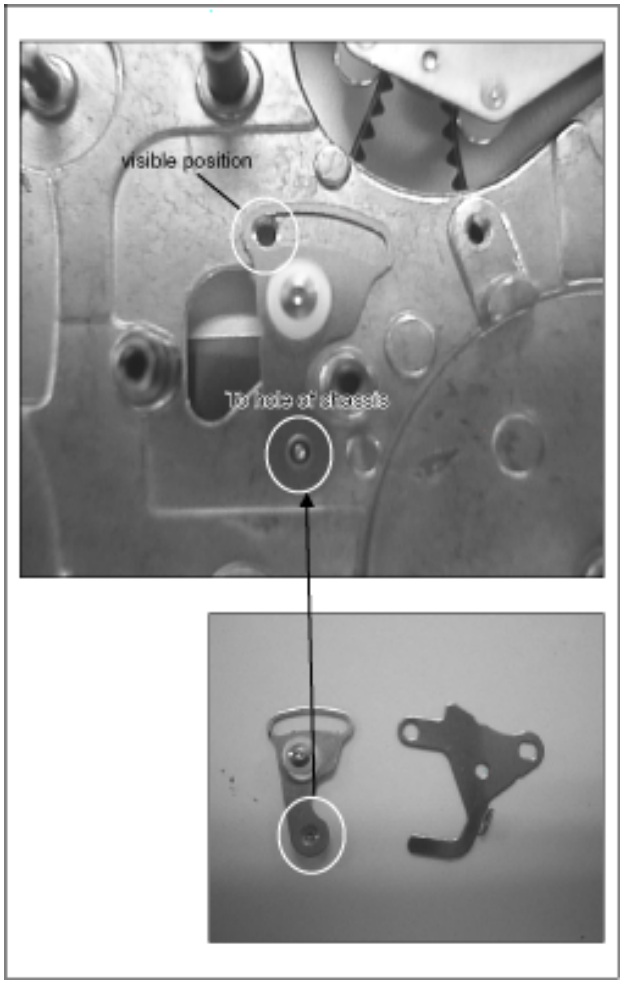


Fig. A2-4

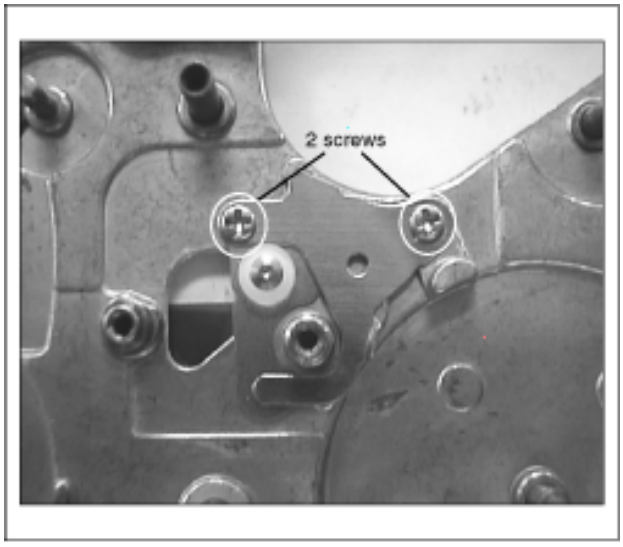


Fig. A3

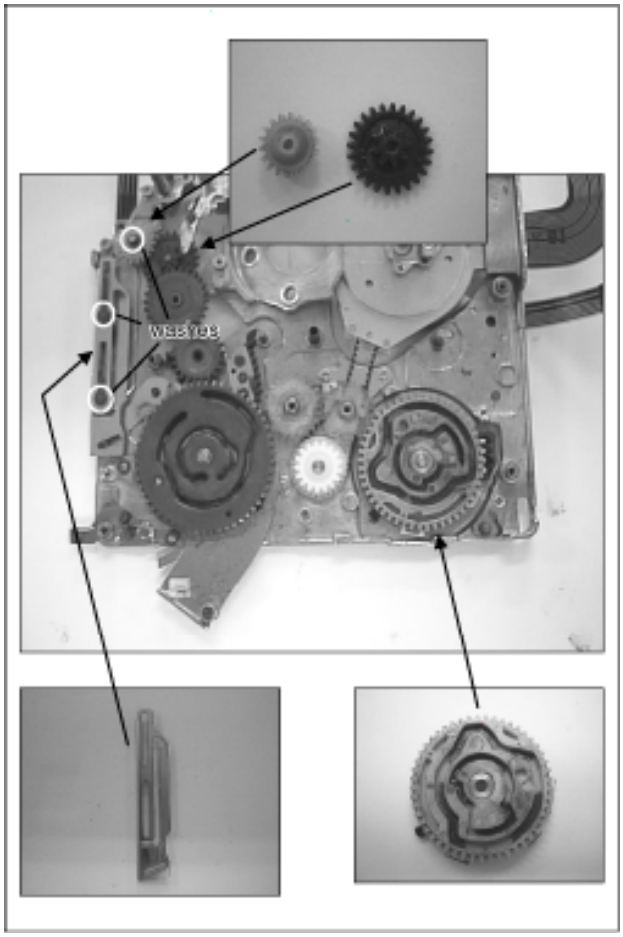


Fig. A4

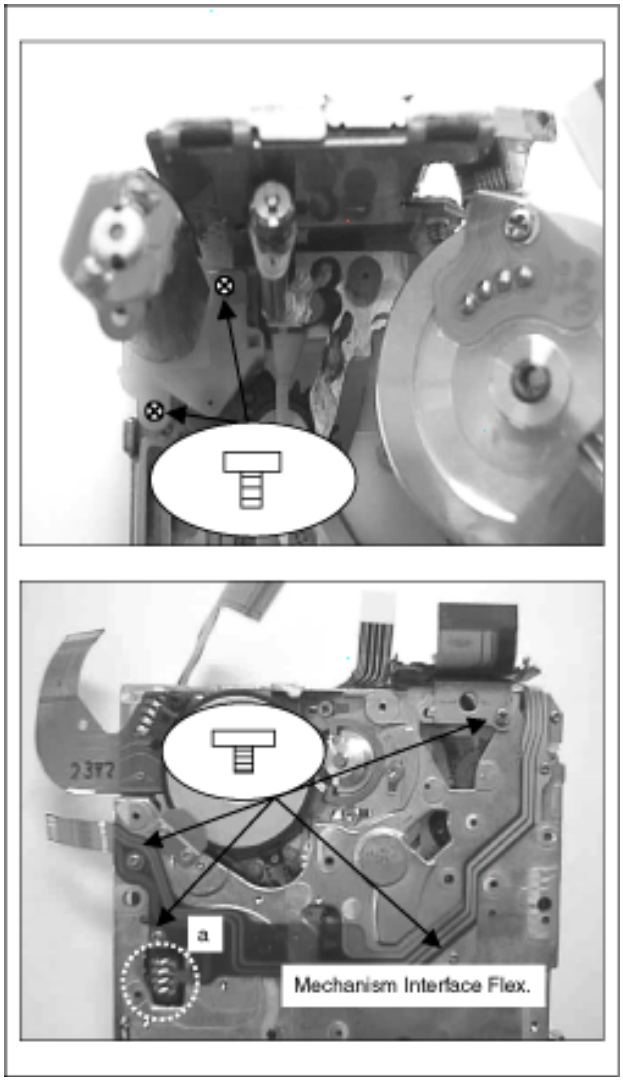


Fig. A5-1

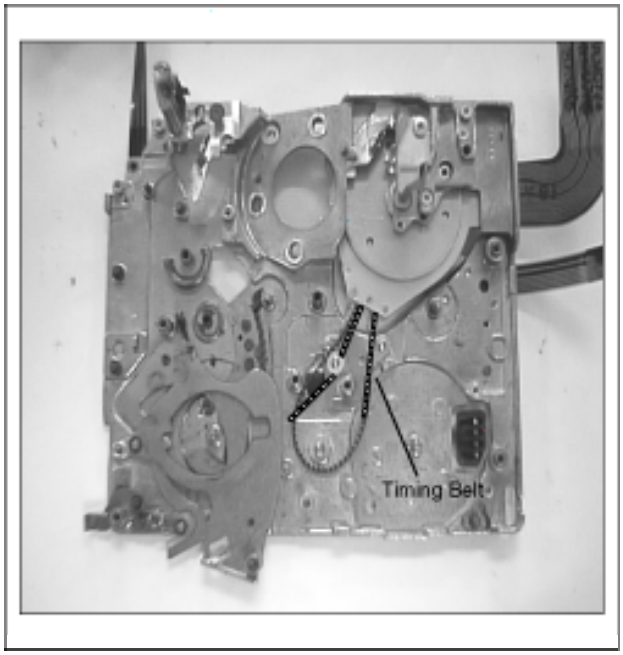


Fig. A5-2

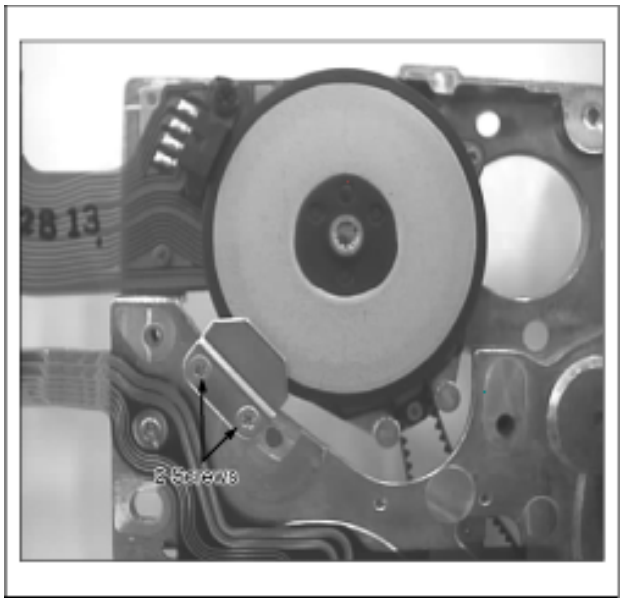


Fig. A6

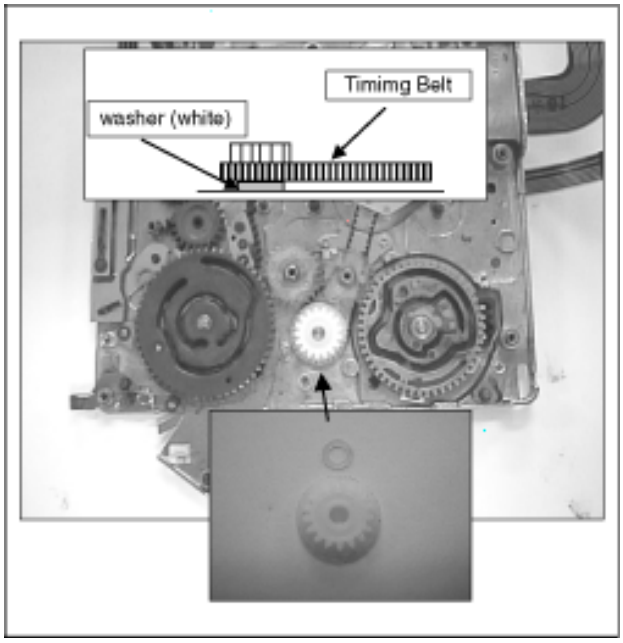


Fig. A7

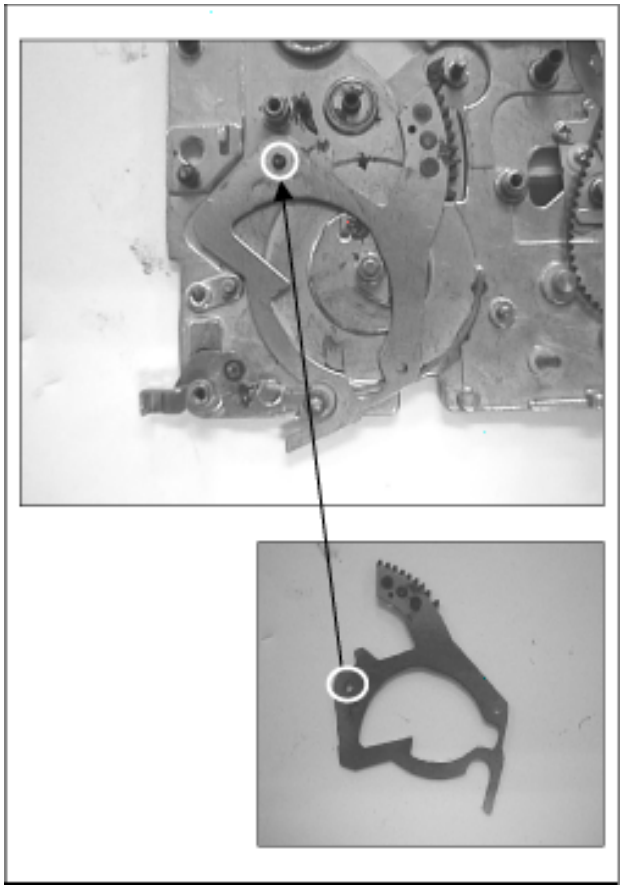


Fig. A8

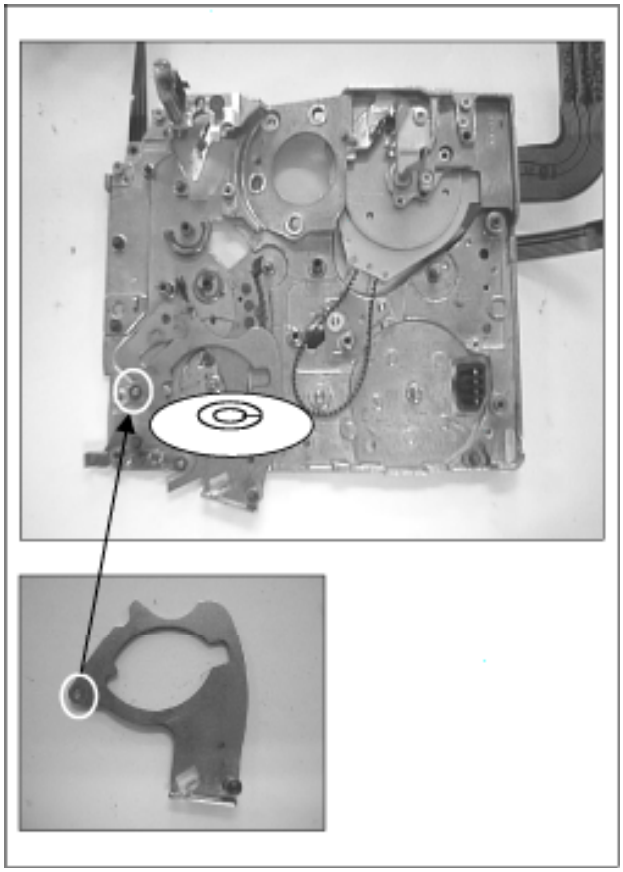


Fig. A9

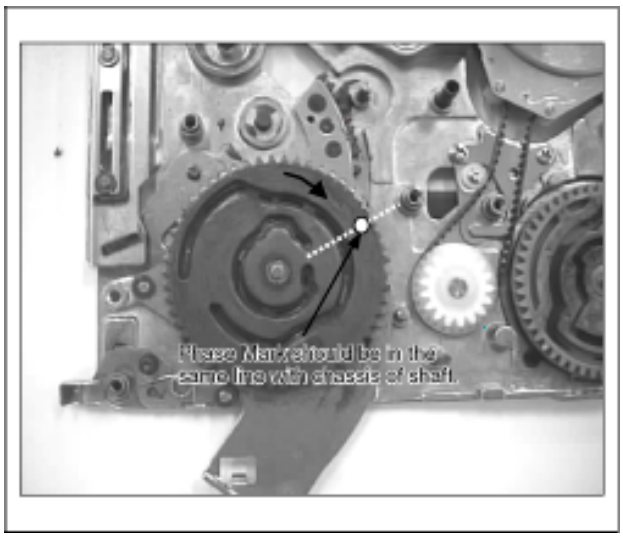


Fig. A10-1

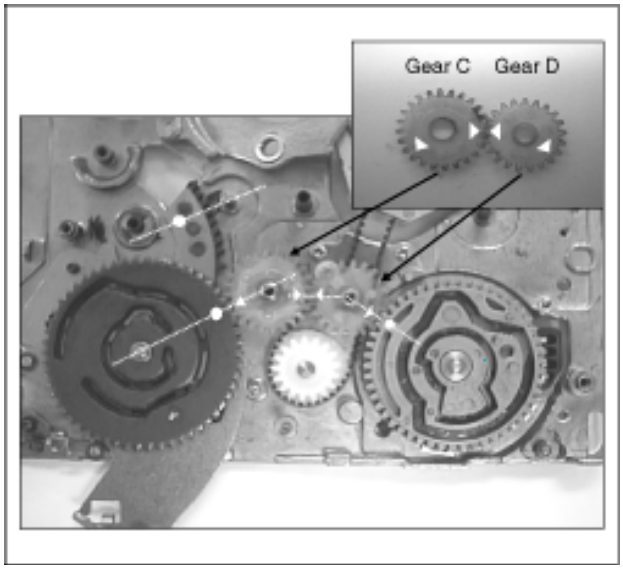


Fig. A10-2

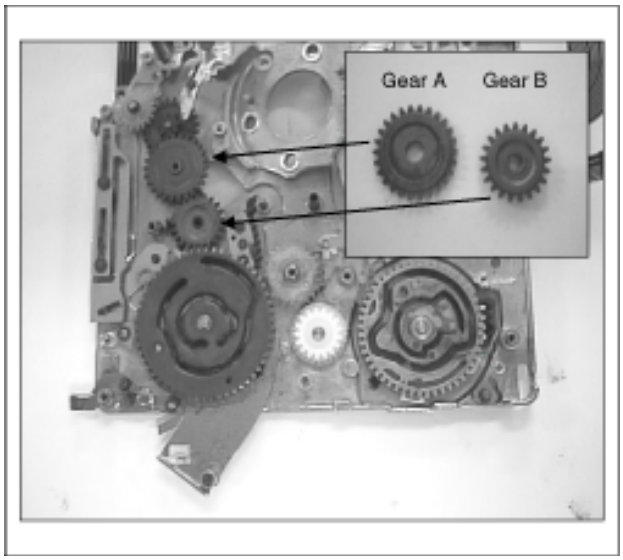


Fig. A11

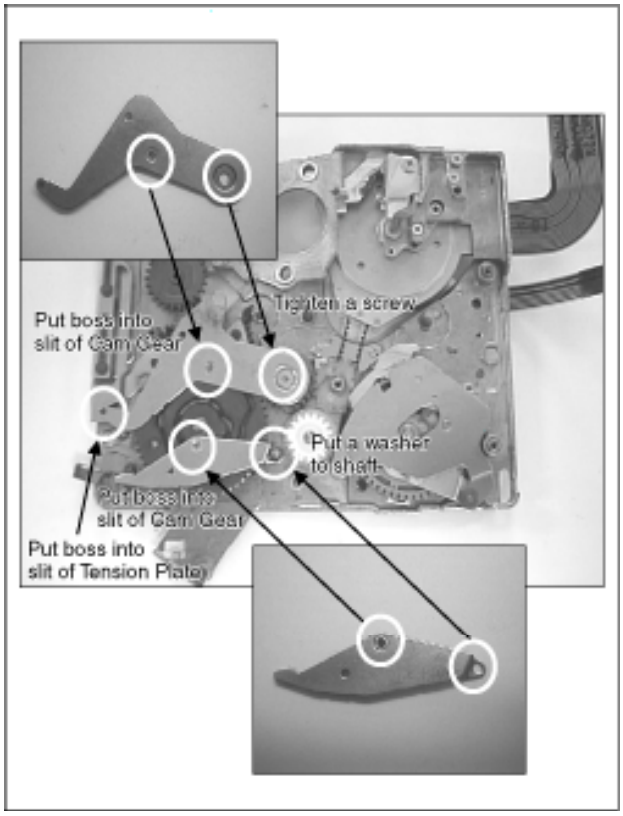

Put boss into slit of Cam Gear
Tighten a screw
Put a washer to shaft
Put boss into slit of Cam Gear
Put boss into slit of Tension Plate

Fig. A12

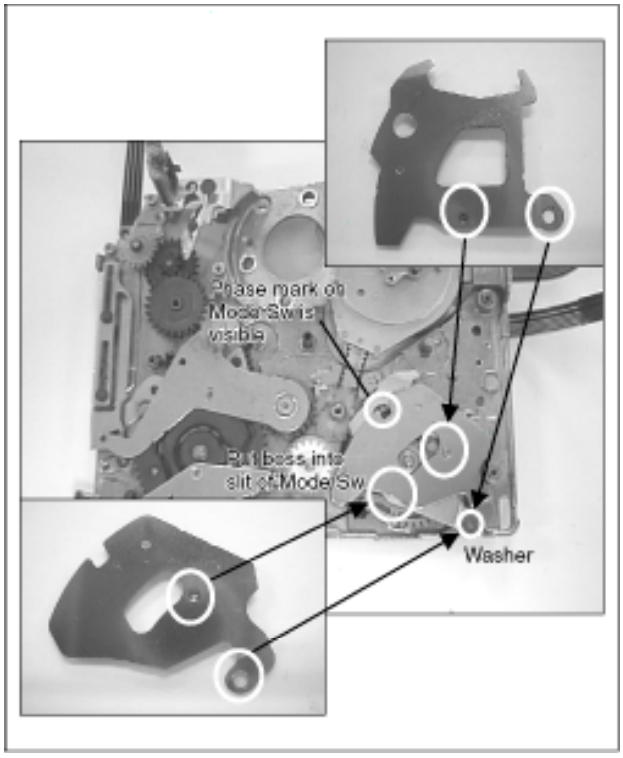


Fig. A13

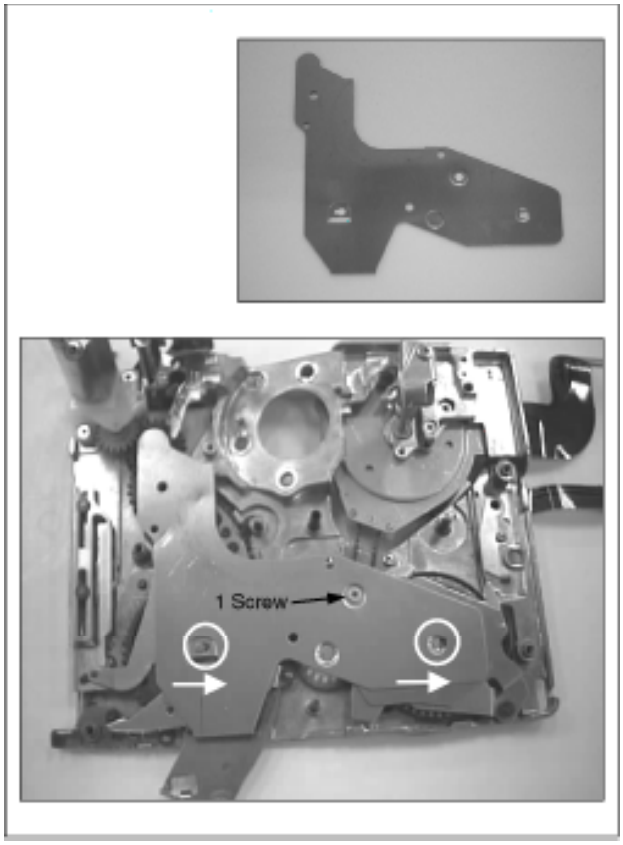


Fig. A14

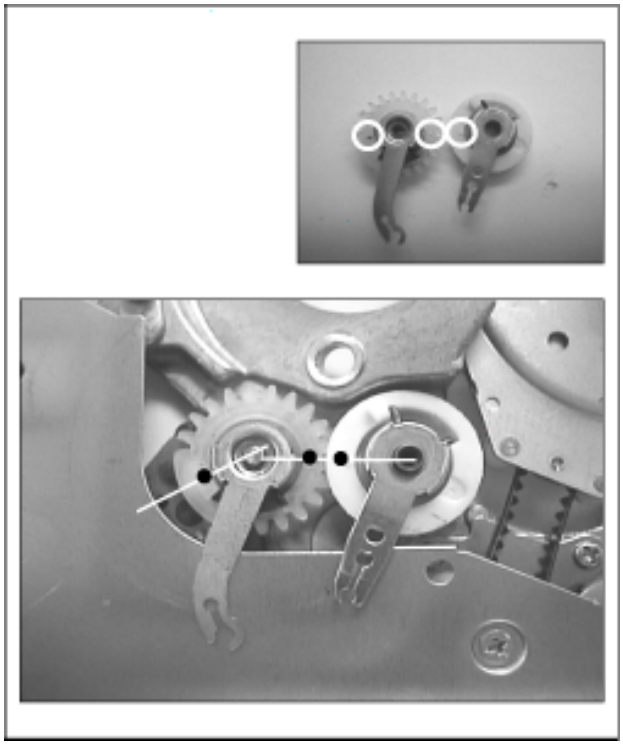


Fig. A15-1

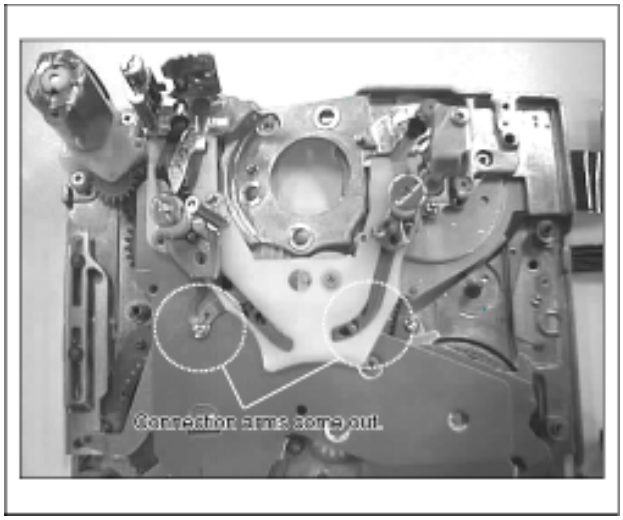


Fig. A15-2

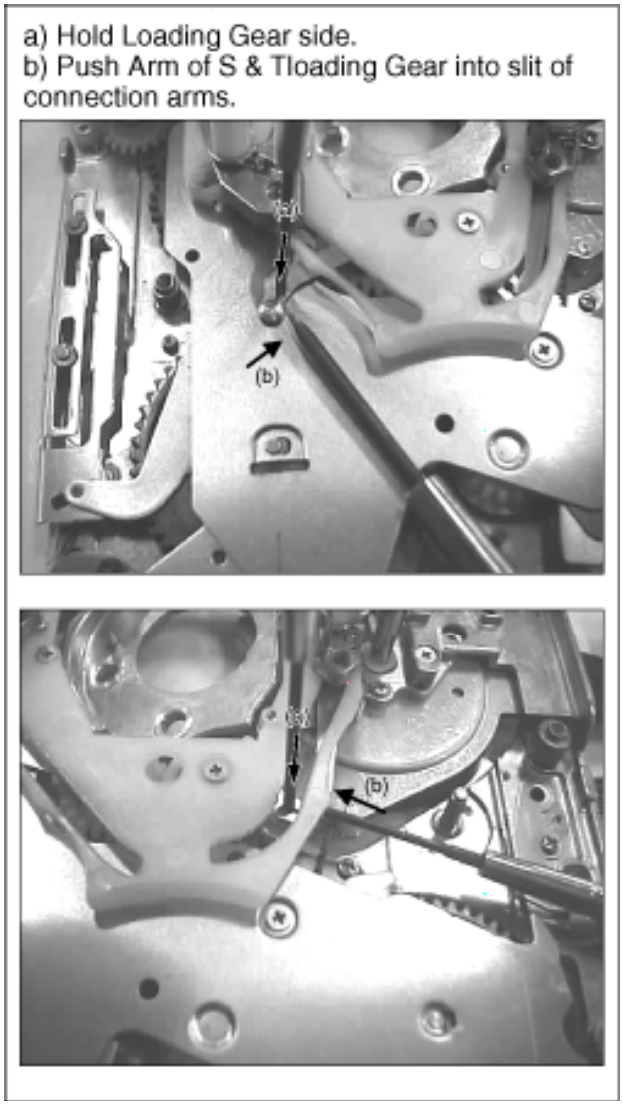

a) Hold Loading Gear side.
b) Push Arm of S & Tloading Gear into slit of connection arms.
(a)
(b)
(a)
(b)

Fig. A15-3

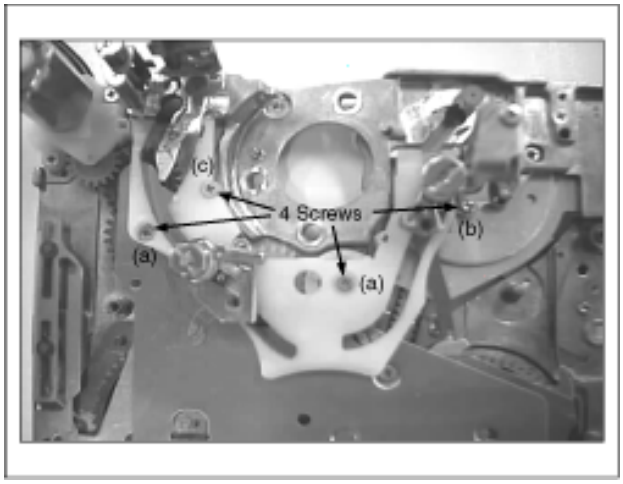

(c)
4 Screws
(b)
(a)
(a)

Fig. A16-1

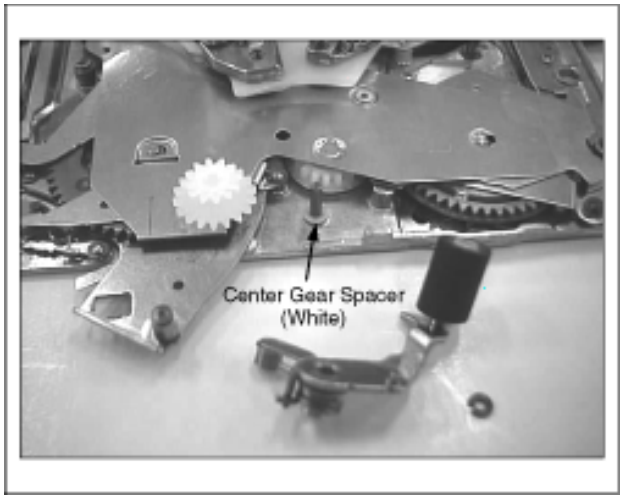


Fig. A16-2

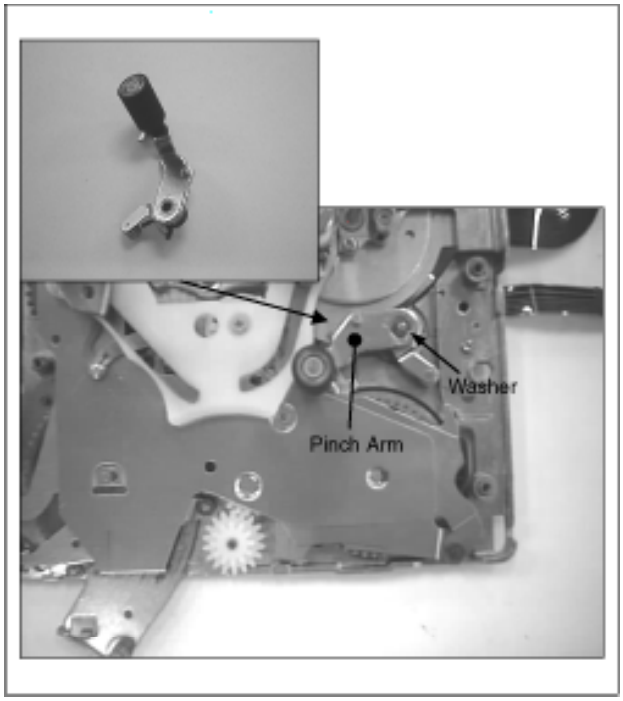


Fig. A17-1

Bottom Side of Take up

Fig. A17-2

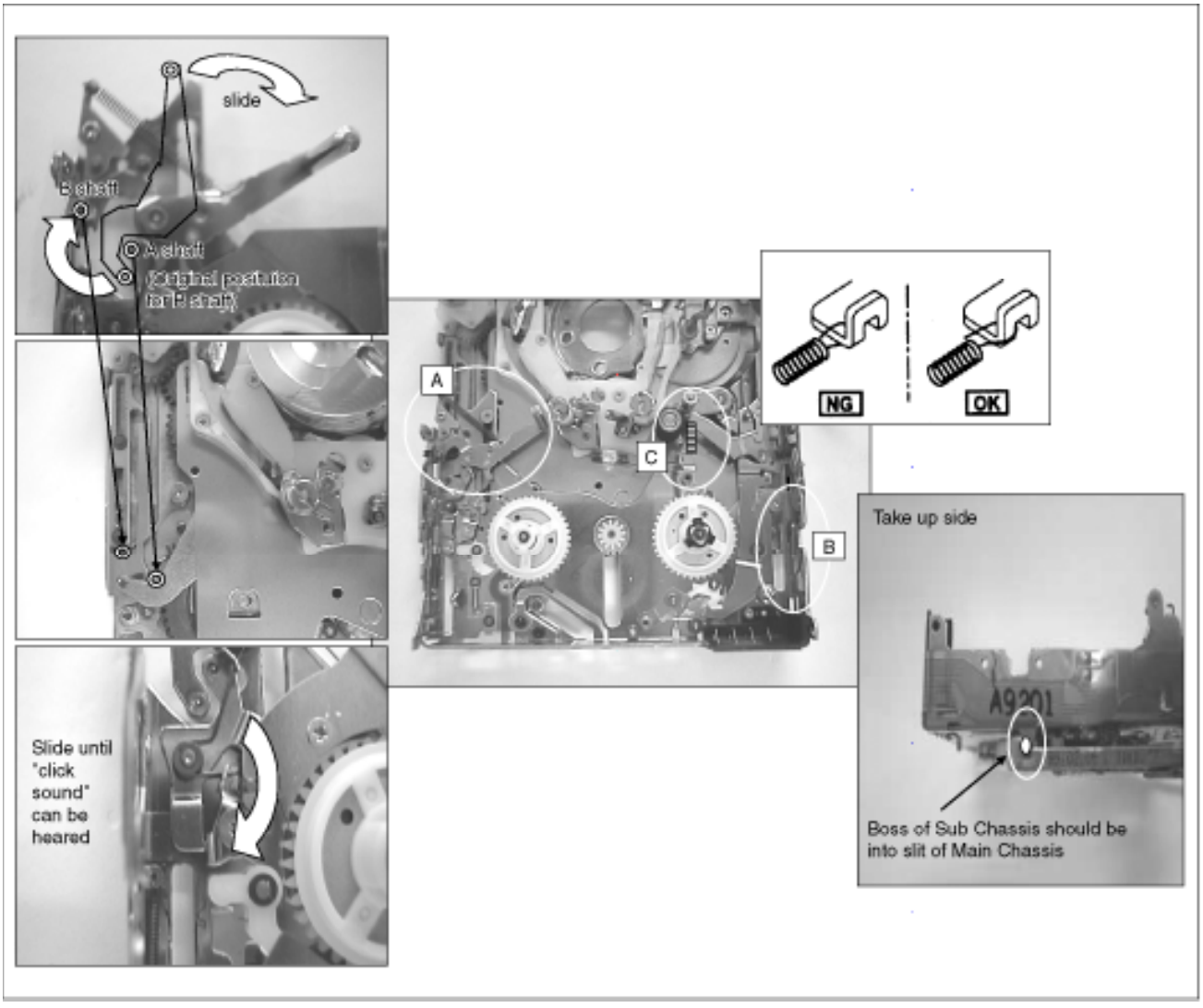

slide
B shaft
A shaft
(Original position for B shaft)
A
C
B
NG
OK
Take up side
A9201
Boss of Sub Chassis should be into slit of Main Chassis
Slide until "click sound" can be heared

Fig. A17-3

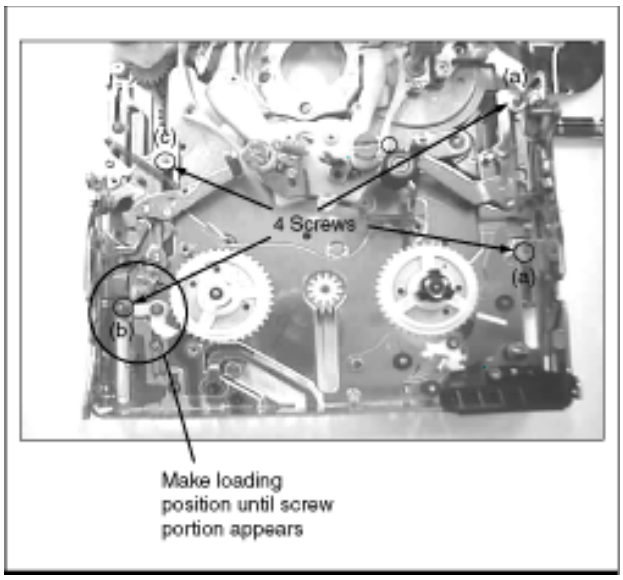


Fig. A17-4

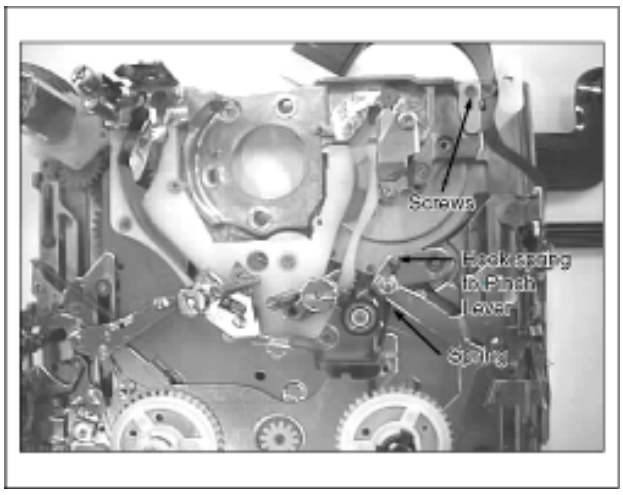


Fig. A18-1

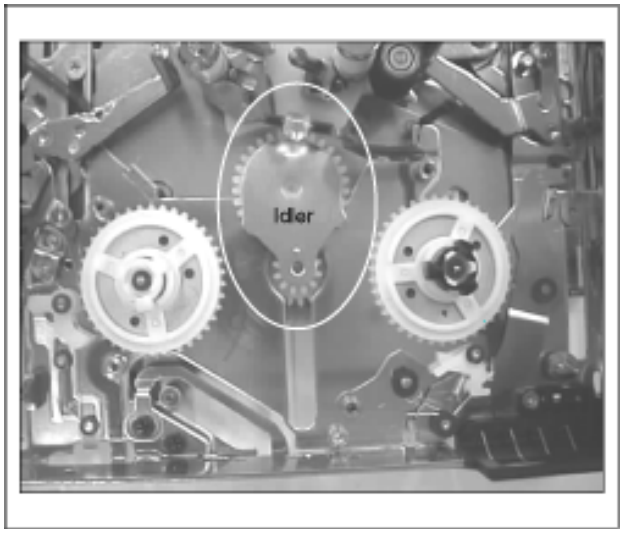


Fig. A18-2

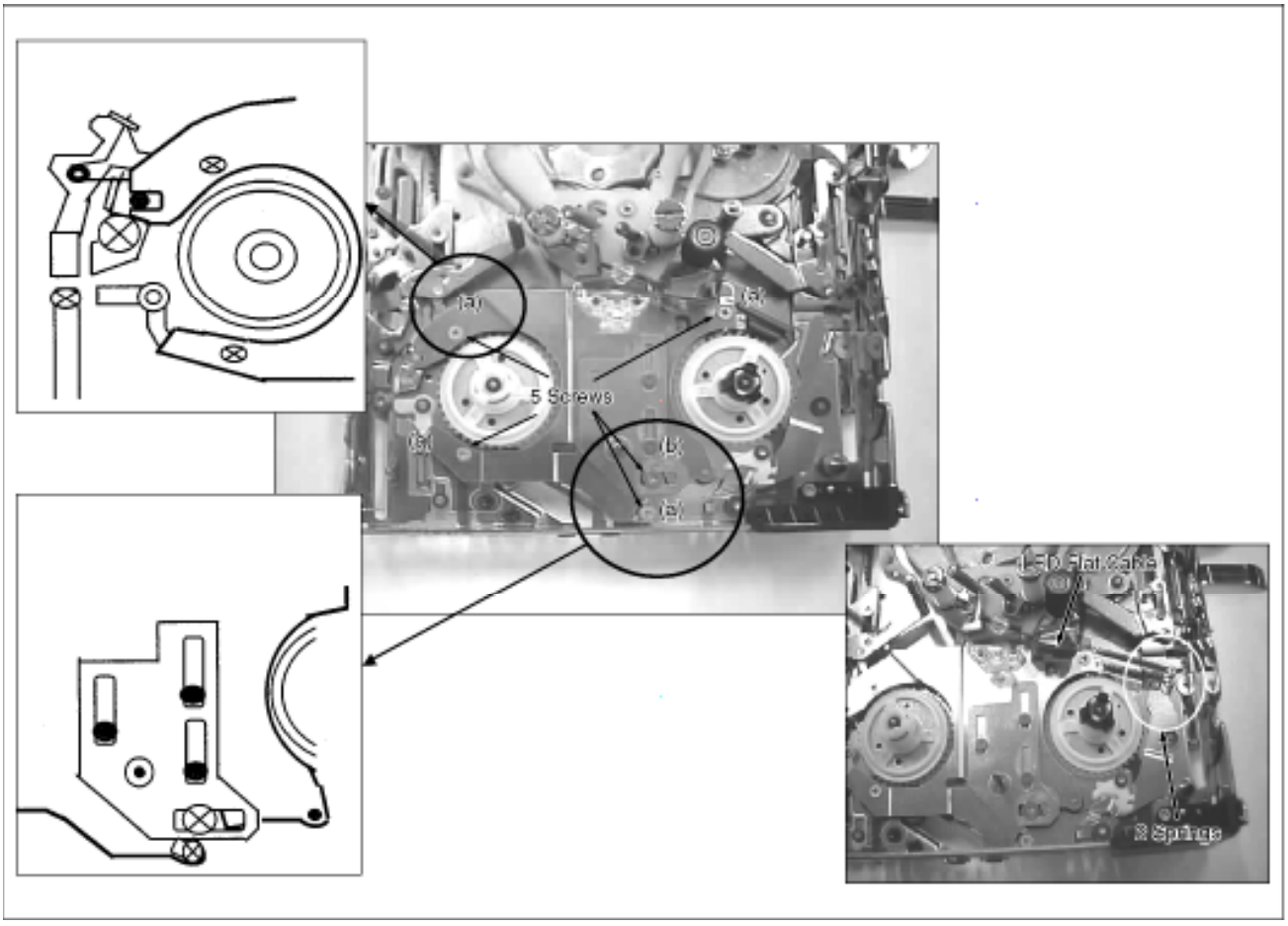


Fig. A18-3

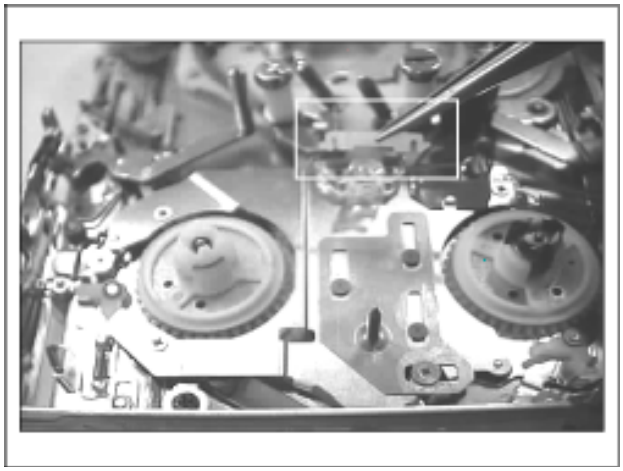


Fig. A19-1

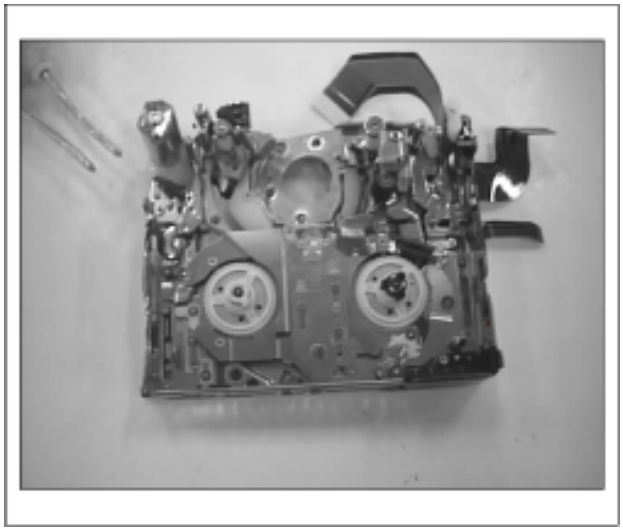


Fig. A19-2

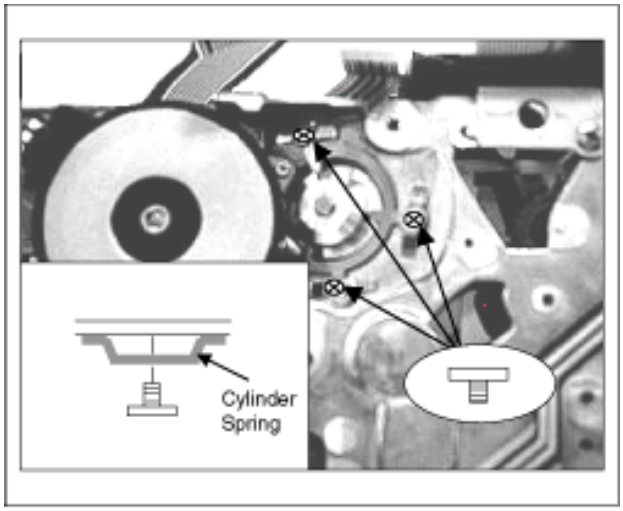


FIg. A19-3

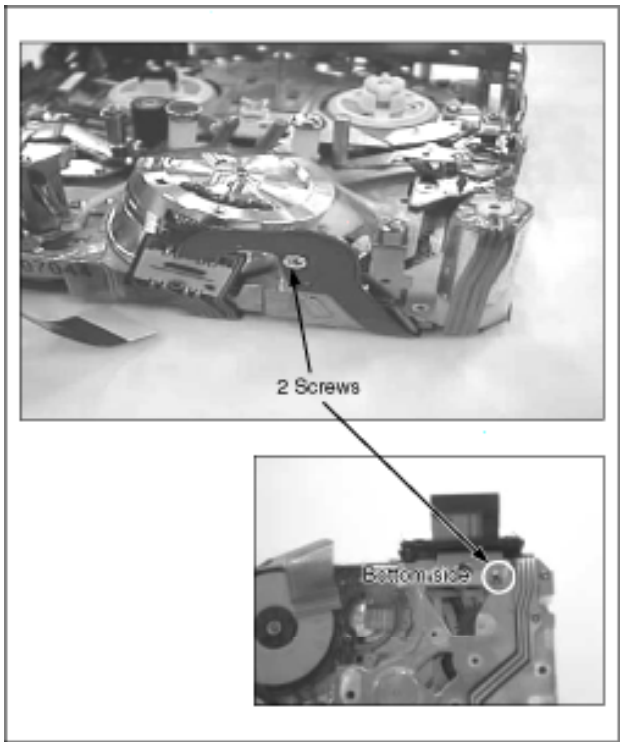


Fig. A20-1

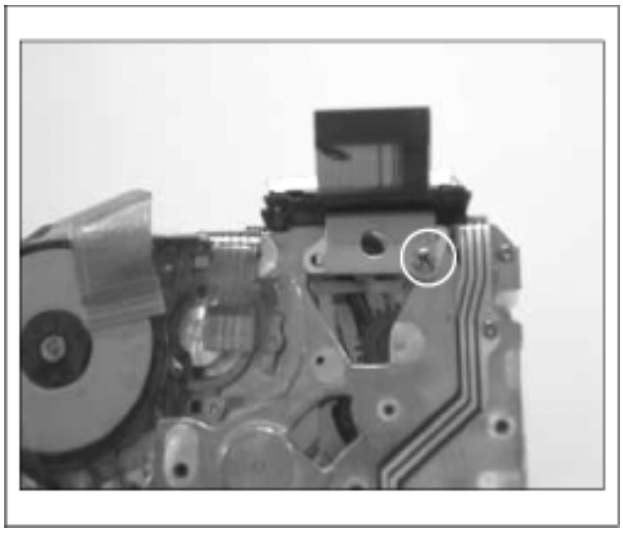


Fig. A20-2

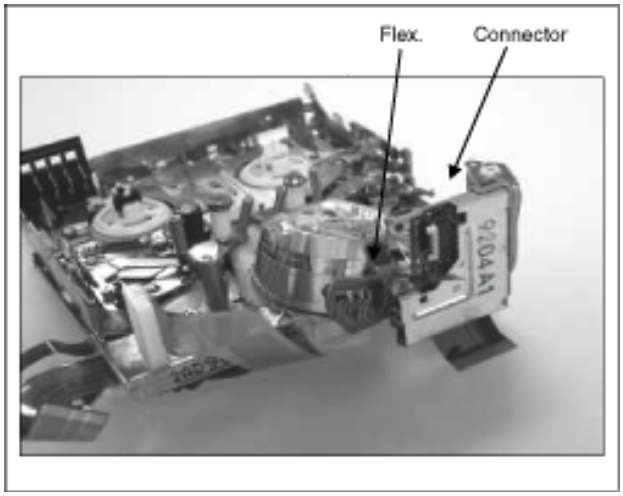


Fig. A20-3

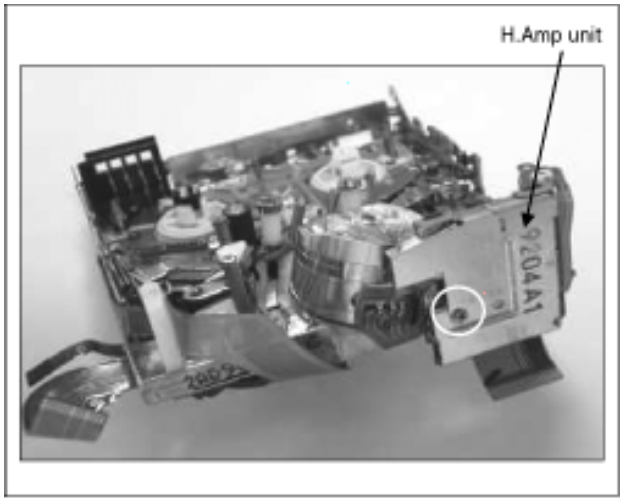


Fig. A21-1

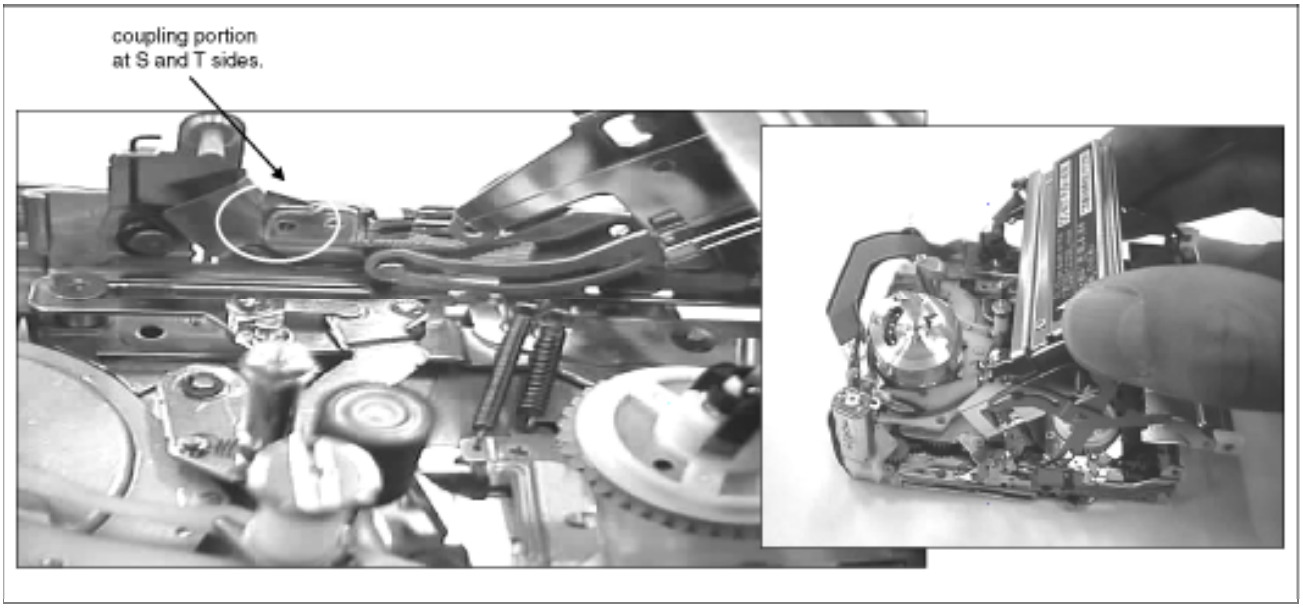


Fig. A21-2

TOP PREVIOUS NEXT

5.1 MECHANICAL ADJUST TABLE

TOP PREVIOUS NEXT

* 1) H.Amp Unit is applied only Q1 & Q2 mechanism.

No.	Item	Confirmation of Tape Running	Linearity Adjustment	Confirmation of B.E.R. Value	Capstan tilt Adjustment	S3 Base adjustment	Sub Chassis Adjustment
1	MECHANISM CHASSIS	--	--	•	--	--	--
2	Cassette Up Unit.	--	--	--	--	--	--
*3	H Amp Unit.	--	--	•	--	--	--
4	Cylinder Unit	•	•	•	--	--	--
5	RT Flex. Flame.	--	--	--	--	--	--
6	LED Holder	--	--	--	--	--	--
7	Cover Plate	--	--	--	--	--	--
8	Idler U.	--	--	•	--	--	--
9	Sub Chassis Unit	•	•	•	--	--	•
10	Pinch Arm	•	•	•	--	--	--
11	Center Gear	--	--	•	--	--	--
12	Rail Unit	•	•	•	--	--	--
13	S-Loading Gear	--	--	•	--	--	--
14	T-Loading Gear	--	--	•	--	--	--
15	Gear Cover	--	--	•	--	--	--
16	Pinch Beetle	--	--	•	--	--	--
17	Release Beetle	--	--	•	--	--	--
18	Tension Lever	•	•	•	--	--	--
19	Eject Arm	--	--	--	--	--	--
20	Interface Gears	--	--	•	--	--	--
21	Cam Gear	--	--	•	--	--	--
22	Chassis Radon	--	--	--	--	--	--
23	Boat Radon	--	--	--	--	--	--
24	Drive Gear	--	--	•	--	--	--
25	Capstan Holder	--	--	--	--	--	--
26	Capstan Motor	•	•	•	•	--	--
27	Loading Motor Unit	--	--	--	--	--	--

28	Mechanism Interface Flex.	--	--	--	--	--	--
29	Mode Switch	--	--	--	--	--	--
30	Deceleration Gears	--	--	•	--	--	--
31	Tension Plate	•	•	•	--	--	--
32	T4 Guide	--	--	--	--	--	--
33	Eject Lever	--	--	--	--	--	--
34	Pulley Cover	--	--	--	--	--	--
35	Pulley	--	--	--	--	--	--
36	S3 Base U.	•	•	•	--	•	--

TOP PREVIOUS NEXT

5.2 MECHANICAL ADJUSTMENT PROCEDURE

TOP PREVIOUS NEXT

No.	Item	Equipment	Fig.	Procedure
1	Confirmation of Tape Running	1. Alignment Tape (PAL: VFM3110EDS/NTSC: VFM3010EDS) 2. Post Adjustment Driver(VFK1278)	Fig. AD1-1	1) Confirm each post position in playback mode.
			Fig. AD1-2	2) Confirm condition of tape regulation in playback & review mode.
2	Linearity Adjustment	1.Tatsujin system(Refer to Fig.)	Fig. AD2-1	1) Set up Tatsujin System.
		2. Alignment Tape (PAL: VFM3110EDS/NTSC: VFM3010EDS) 3. Envelope Detecor Board (VFK1641) 4. Post Adjustment Driver (VFK1278)	Fig. AD2-2	2) Connect Envelope Detector Board between Measuring Board & Oscilloscope.
			--	3) Remove Adjustment Cover. * Location for Adjustment Cover depends on Models.
			Fig. AD2-3	4) Playback the Alignment Tape and adjust S2 & T3 posts by Screw Driver until wavefom becomes flat. After adjustment, B.E.R. should be confirmed by Electrial adjustment on the "Tatsujin".
3	Confirmation of B.E.R. Value	1.Tatsujin system(Refer to Fig.)	Fig. AD2-1	1) Refer to Electrical Adjustment on the "Tatsujin".
4	Capstan tilt Adjustment	1. Capstan Tilt Adj. Jig(VFK1638) 2. Small Phillips Screw Driver	Fig. AD4-1	1) Slide sensor pin to Capstan shaft. After touching,if OK, LED should be lit. * Do not touch when you confirm LED lit or not.
			Fig. AD4-2	2) If Ng, Capstan tilt should be adjusted. a) Tighten screw (A) until LED is lit. b) Loose screw (B) until LED is not lit. c)Tightenscrew (A) unti-clockwise until LED is lit .
5	S3 Base adjustment	1. Post Adjustment Driver(VFK1278)	Fig. AD5-1	1) Adjust S3 screw as Evvelope becomes flat.
			Fig. AD5-2	2) Tighten a screw 180 degree as "ENV 1". 3) Loosen a screw as ENV 2. 4) Tighten a screw until ENV becomes flat as ENV 3 and tighten a screw 180 degree again.
6	Sub Chassis Adjustment	1. Small Phillips Screw Driver	Fig. AD6-1	1) Make Review Position. * Set Loading mode and then,stop Pinch Roller & Capstan shaft is touched.

			Fig. AD6-2	2) Loosen a screw. After fixing a shaky Sub Chassis,then tighten a screw.

Fig. AD1-1

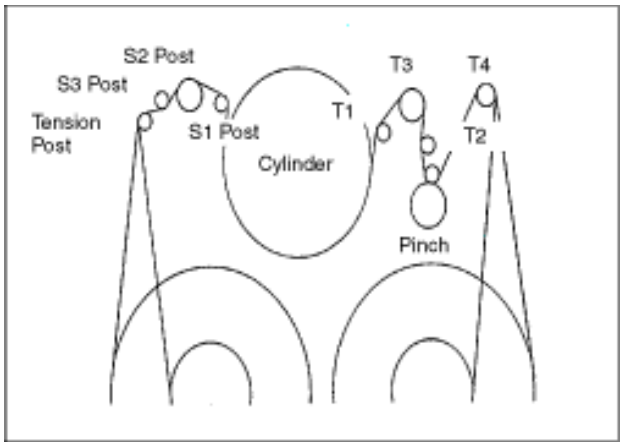


Fig. AD1-2

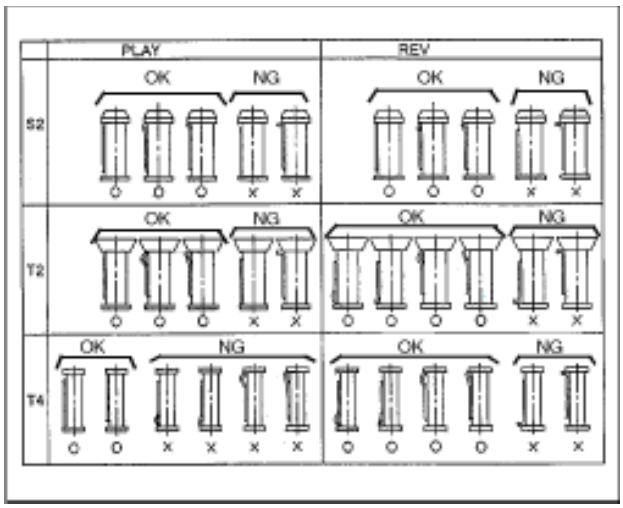


Fig. AD2-1

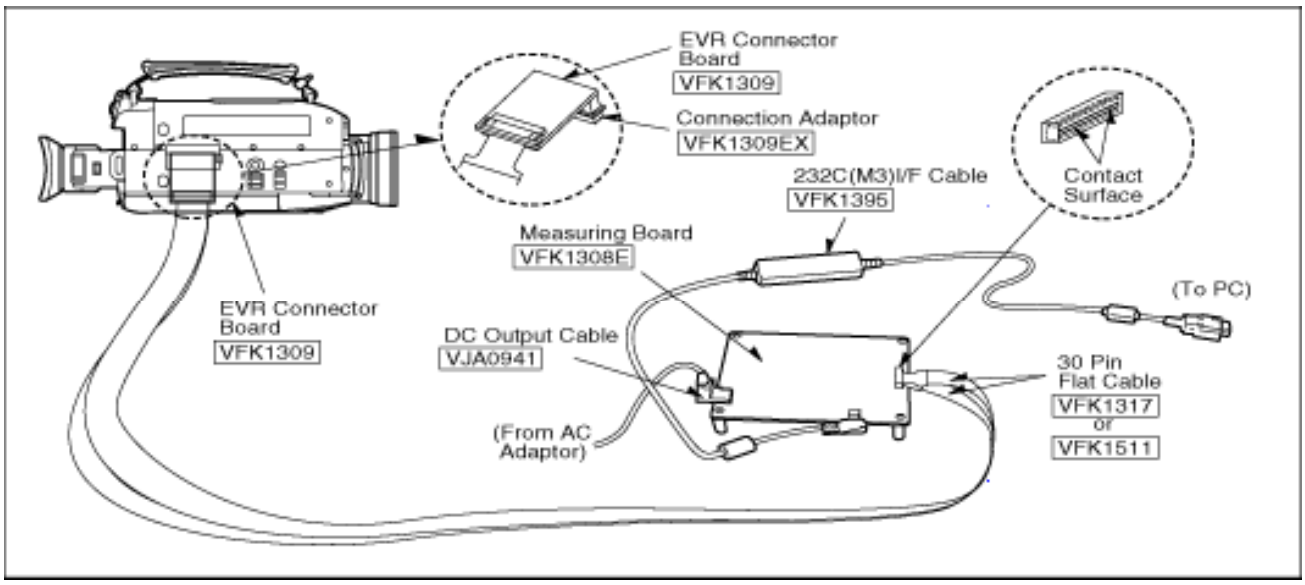


Fig. AD2-2

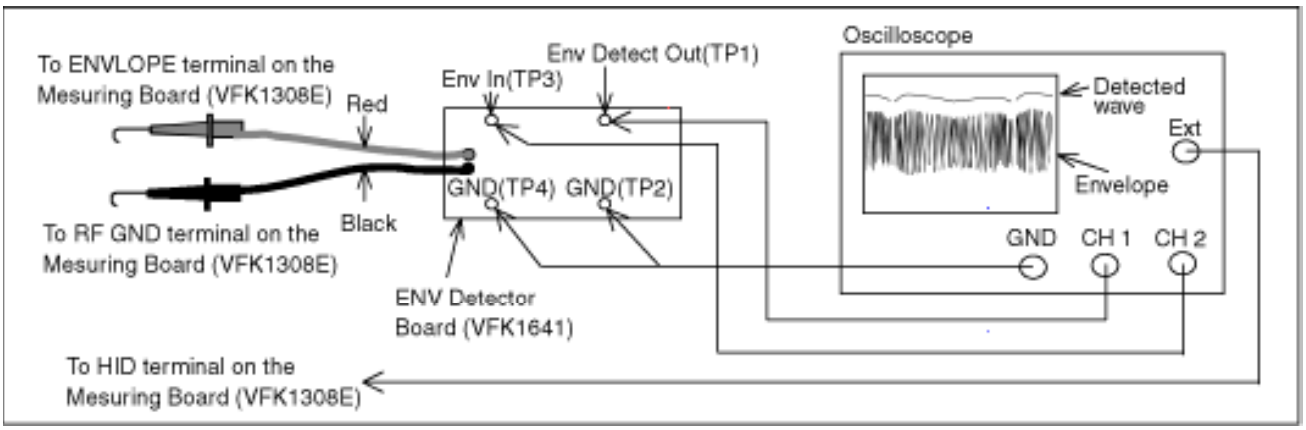


Fig. AD2-3

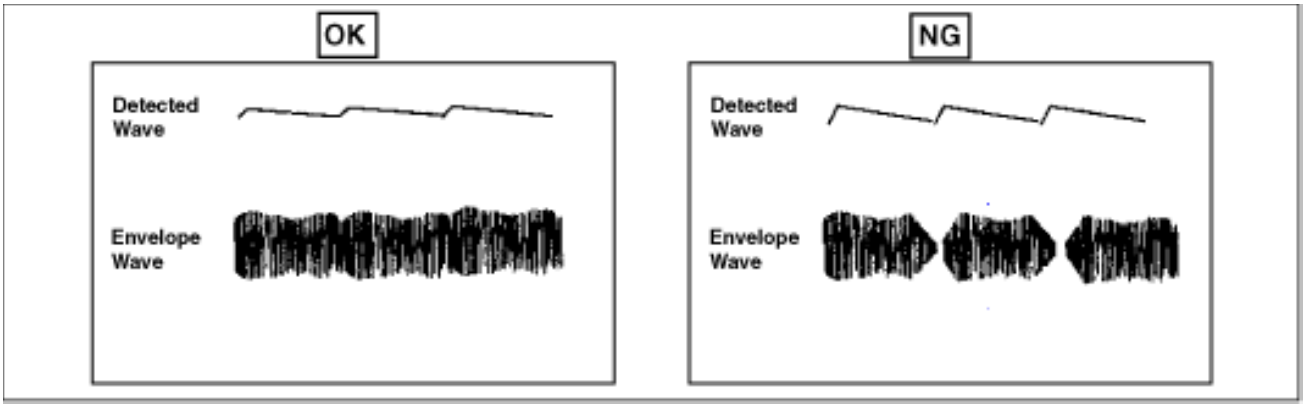


Fig. AD4-1

Fig. AD4-2

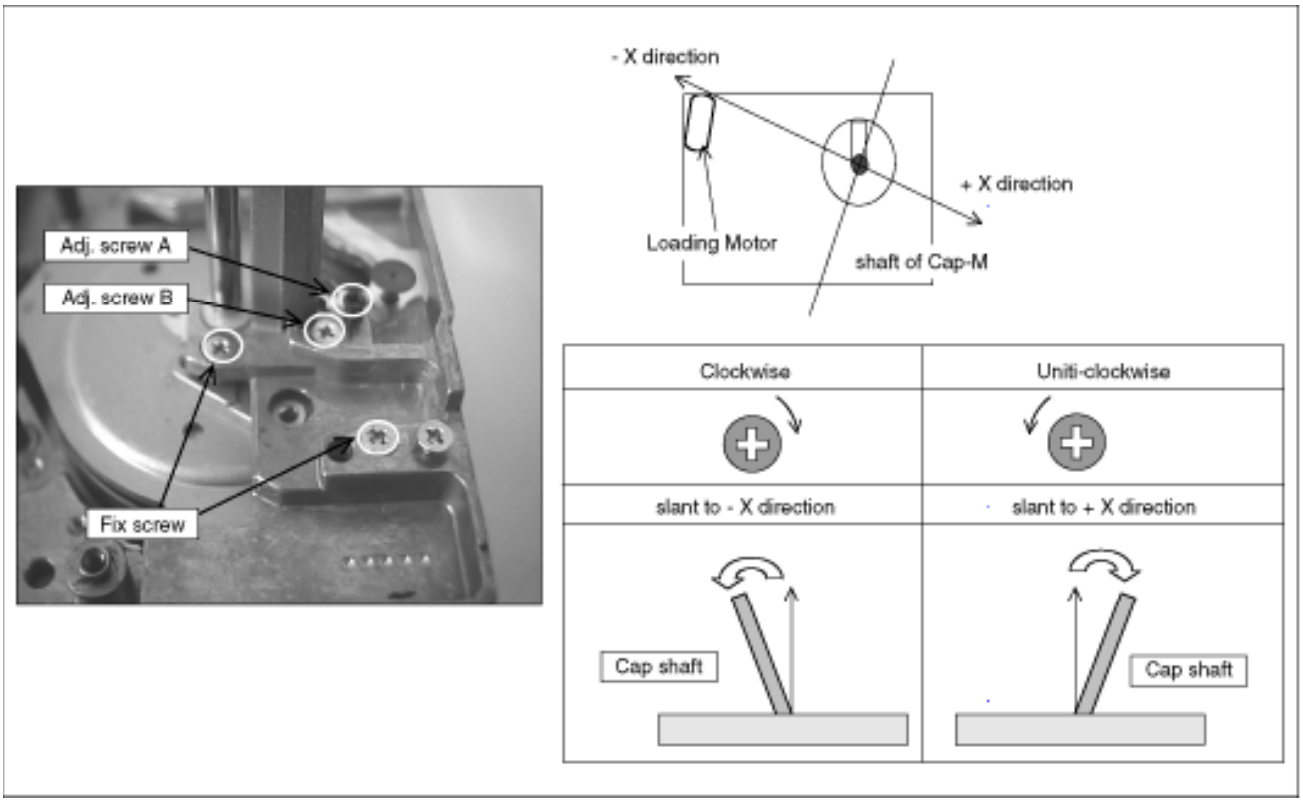


Fig. AD5-1

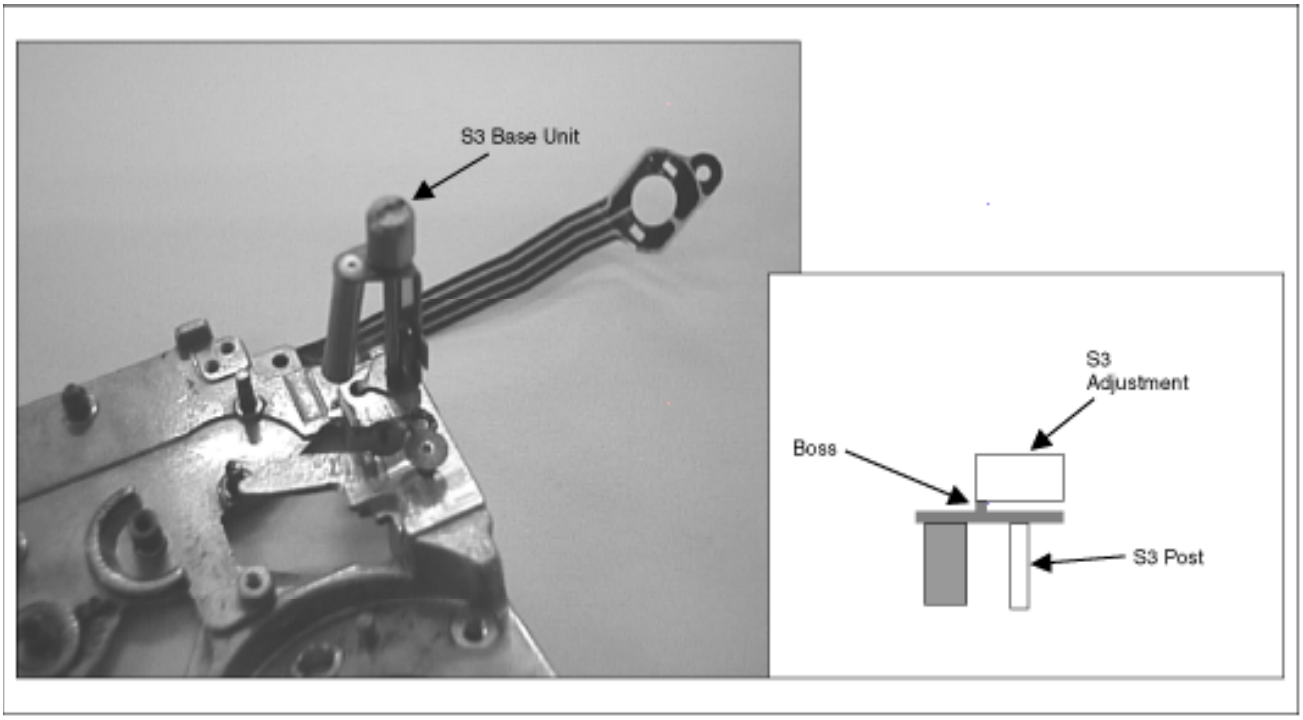


Fig. AD5-2

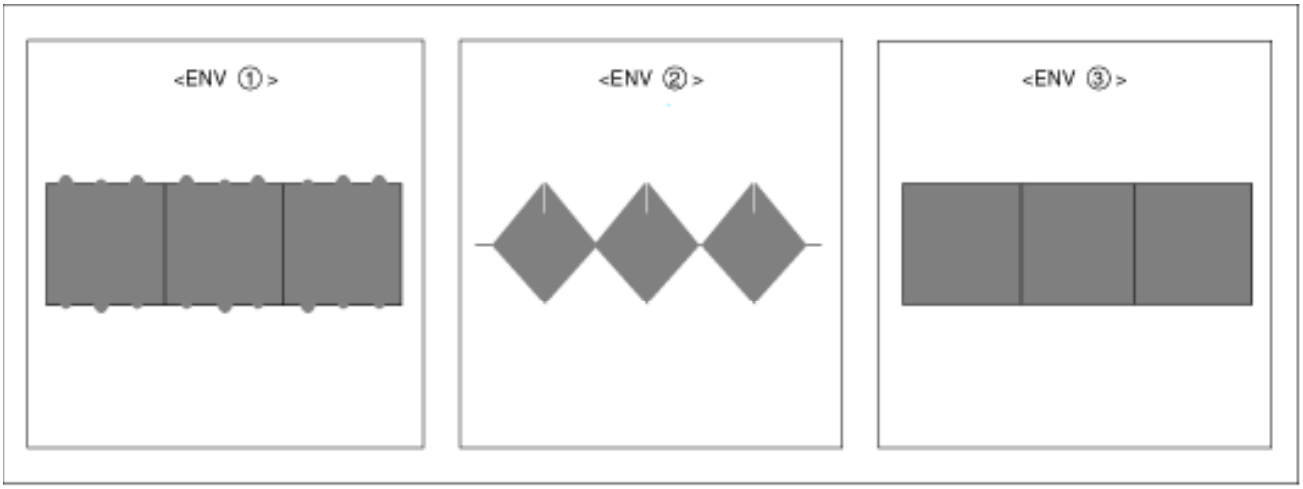


Fig. AD6-1

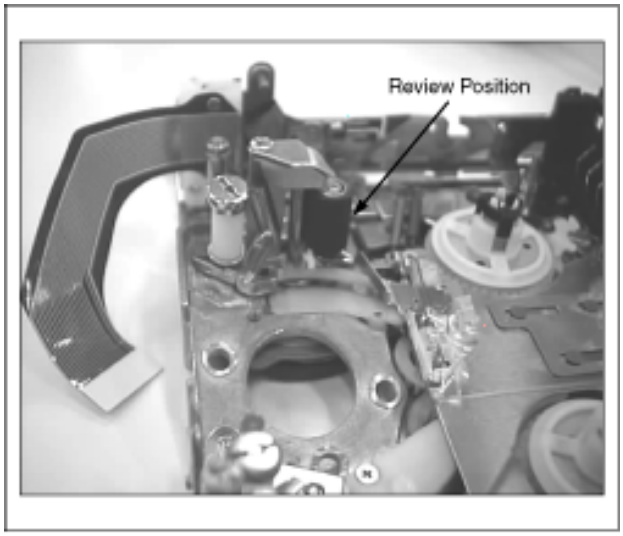
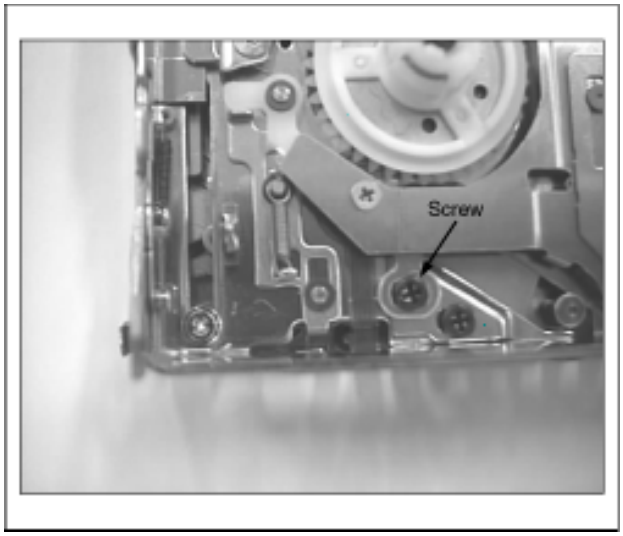


Fig. AD6-2

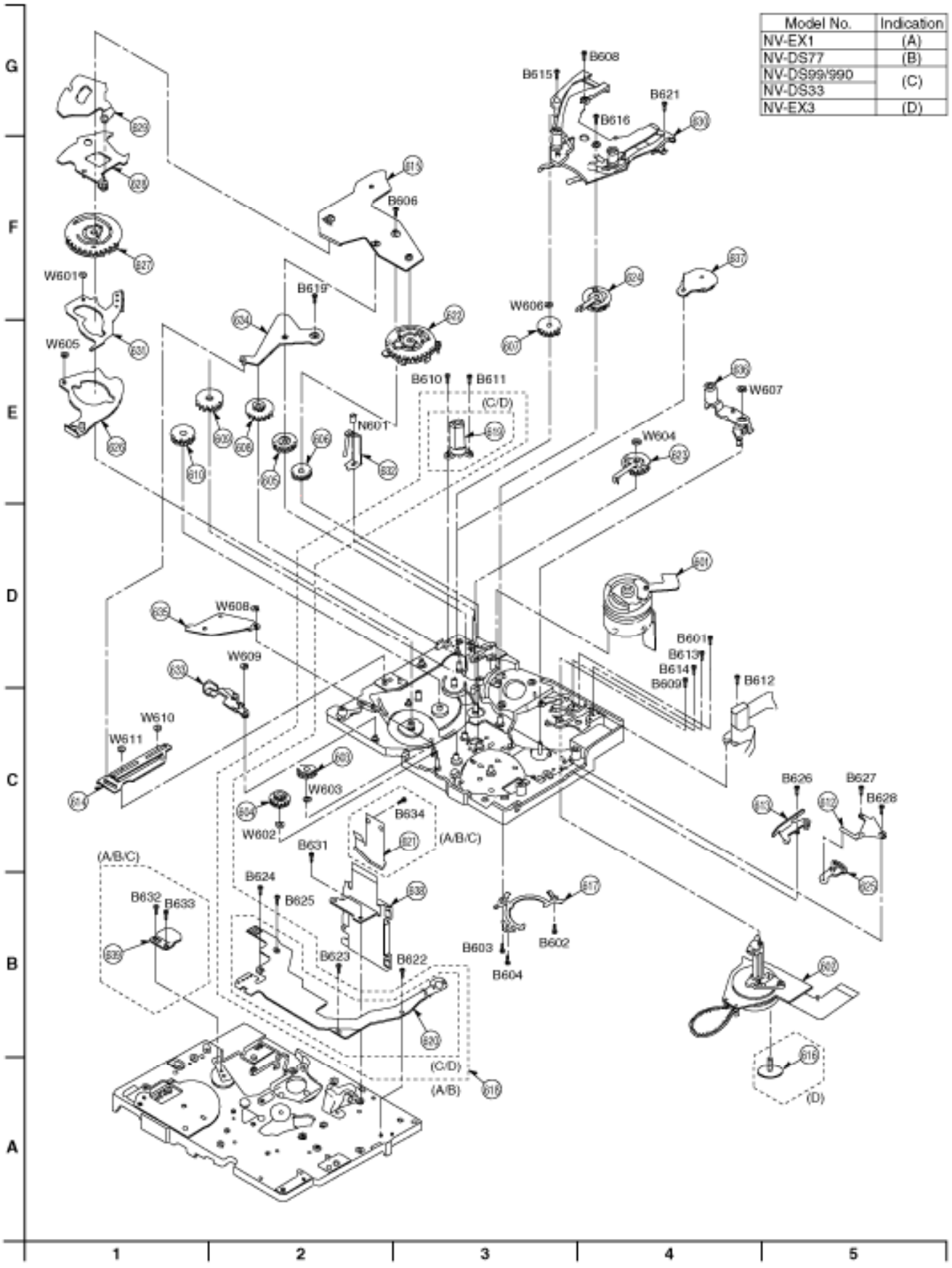


TOP PREVIOUS NEXT

6.1 Q1& Q2 VCR MECHANISM SECTON (1)

TOP PREVIOUS NEXT

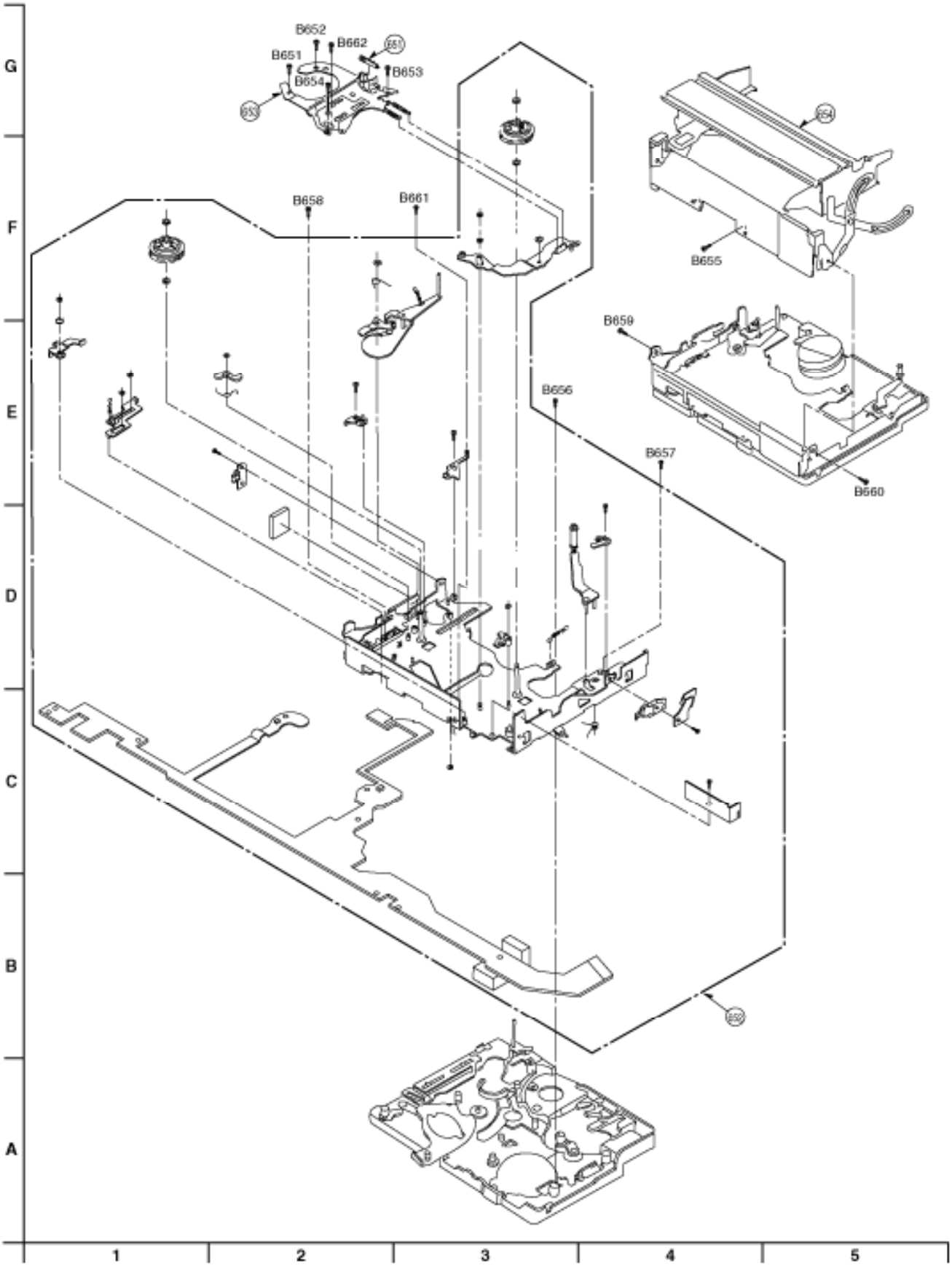
TOP PREVIOUS NEXT


Model No. | Indication
NV-EX1 | (A)
NV-DS77 | (B)
NV-DS99/990 | (C)
NV-DS33 | (C)
NV-EX3 | (D)
G
F
E
D
C
B
A
1
2
3
4
5
B608
B615
B621
B616
B606
B619
W601
W605
W606
B610
B611
(C/D)
W607
W604
N601
W608
W609
W610
W611
W603
W602
B601
B613
B614
B609
B612
B626
B627
B628
B634
(A/B/C)
B631
B624
B625
B632
B633
B623
B622
B603
B602
B604
(C/D)
(A/B)
(D)

6.2 Q1& Q2 VCR MECHANISM SECTION (2)

TOP PREVIOUS NEXT

TOP PREVIOUS NEXT


B652
B662
B651
B653
B654
B658
B661
B655
B650
B656
B657
B660
G
F
E
D
C
B
A
1
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5

6.3 Q3 VCR MECHANISM SECTION (1)

TOP PREVIOUS NEXT

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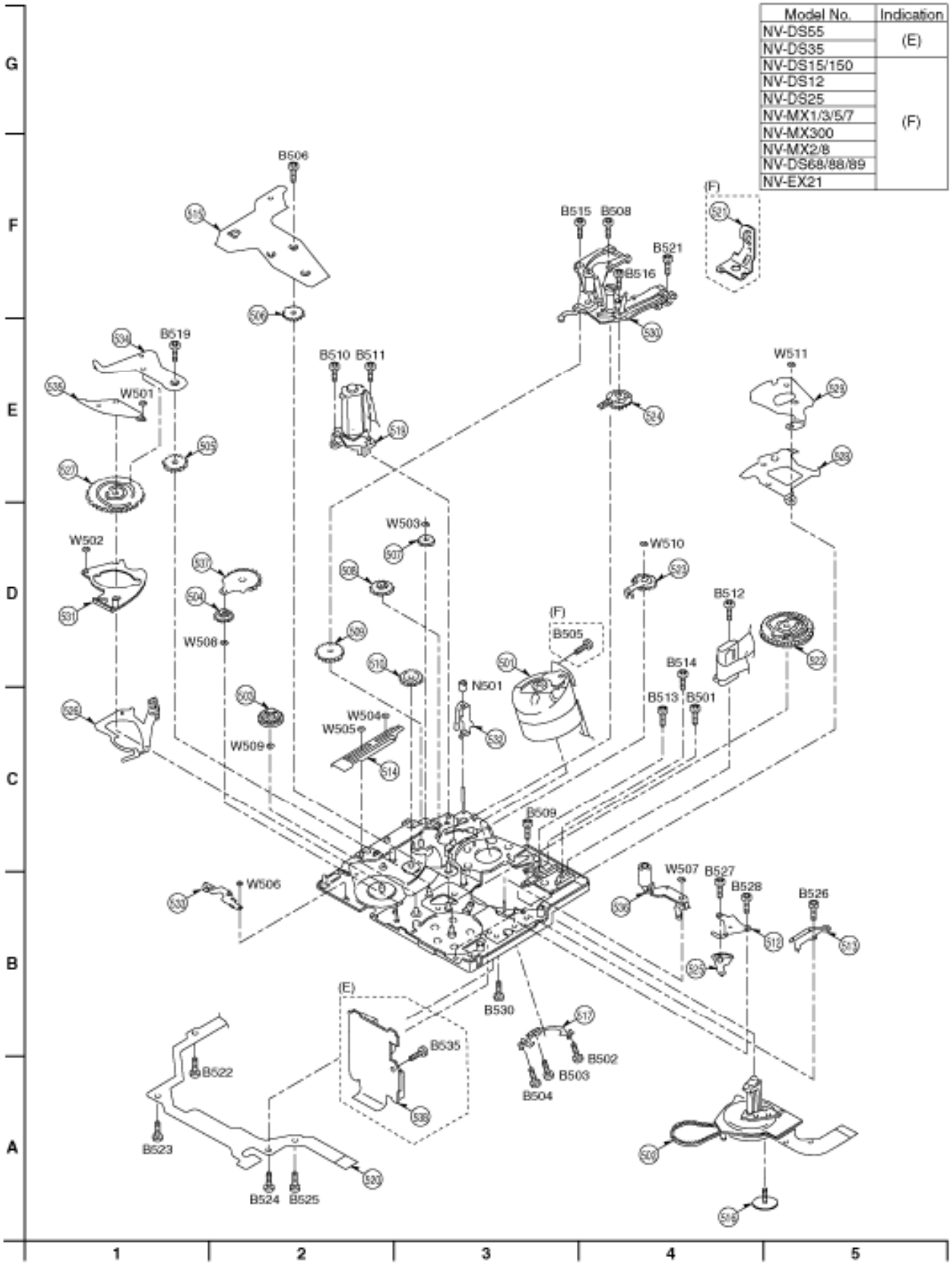
Model No.	Indication
NV-DS55	(E)
NV-DS35	
NV-DS15/150	(F)
NV-DS12	
NV-DS25	
NV-MX1/3/5/7	
NV-MX300	
NV-MX2/8	
NV-DS68/88/89	
NV-EX21	



6.4 Q3 VCR MECHANISM SECTION (2)

TOP PREVIOUS NEXT

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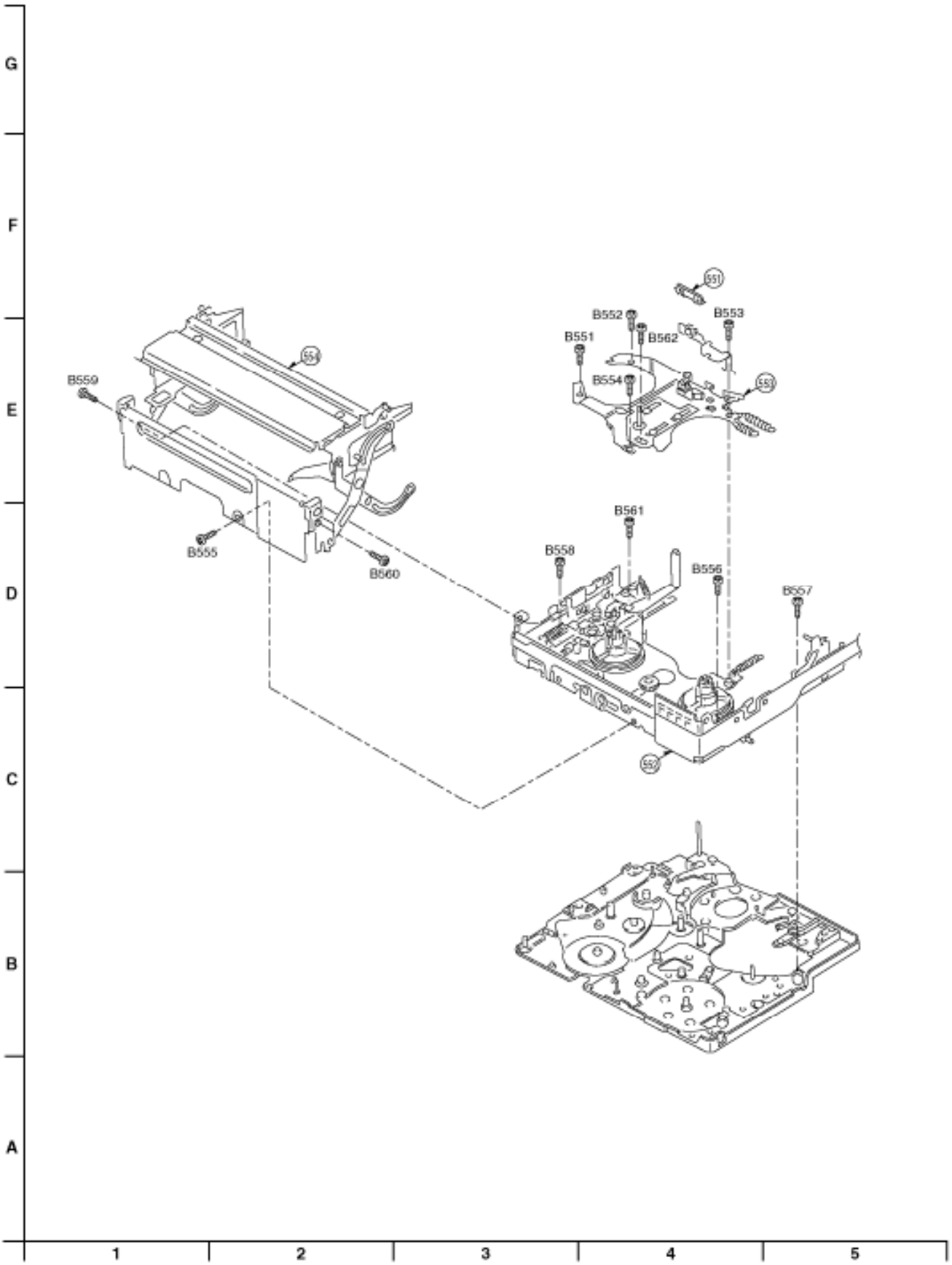
G
F
E
D
C
B
A
1
2
3
4
5
B551
B552
B553
B554
B555
B556
B557
B558
B559
B560
B561
B562
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554
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557

7.1 Q1& Q2 VCR MECHANISM SECTION
(1) PARTS LIST

TOP PREVIOUS NEXT

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark: △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
601	VEG1495	CYLINDER U.	
602	DFX25A7VWB	CAPSTAN U.	
603	VDG1284	DRIVE GEAR	
604	VDG1285	CENTER GEAR	
605	VDG1290	INTERFACE GEAR (C)	
606	VDG1291	INTERFACE GEAR (D)	
607	VDG1295	DECELERATION (A)	NV-EX1,NV-DS77
607	VDG1330	DECELERATION (A)	NV-DS99/990,NV-DS33,NV-EX3
608	VDG1296	DECELERATION (B)	NV-EX1,NV-DS77
608	VDG1331	DECELERATION (B)	NV-DS99/990,NV-DS33,NV-EX3
609	VDG1297	INTERFACE GEAR (A)	
610	VDG1303-A	INTERFACE GEAR (B)	
612	VMA9908	PULLEY COVER	
613	VMA9916	T4 GUIDE	
614	VMA9917	TENSION PLATE	
615	VMA0E52	GEAR COVER	
616	VHD1430	CAPSTAN HOLDER	NV-EX3
617	VMC1443	CYLINDER SPRING	
618	L6DA8DKC0001	LOADING MOTOR U.	NV-EX1,NV-DS77
619	VEM0679	LOADING MOTOR U.	NV-DS99/990,NV-DS33,NV-EX3
620	VWJ1297	MECHANISM INTERFACE FLEX.	NV-DS99/990,NV-DS33,NV-EX3
622	K0ZZ00000453	MODE SWITCH	
623	VXA6124	S LOAD GEAR U.	
624	VXA6125	T LOAD GEAR U.	

625	VXA6133	PULLEY COVER	
626	VXA6134	CHASSIS RADON U.	
627	VXA6135	CAM GEAR U.	
628	VXA6136	PINCH BEETLE	
629	VXA6137	RELEASE BEETLE	
630	VXA6138	RAIL U.	
631	VXA6169	BOAT RADON U.	
632	VXA6184	S3 BASE U.	
633	VXL2814	EJECT LEVER U.	
634	VXL2815	TENSION LEVER U.	
635	VXL2816	EJECT ARM U.	
636	VXL2897	PINCH ARM U.	
637	VXL2818	IDLER U.	
638	VYK8485	HEAD AMP U.	NV-EX1
638	VYK8244	HEAD AMP U.	NV-DS77
638	VYK8886	HEAD AMP U.	NV-DS99/990,NV-DS33
638	VYK9102	HEAD AMP U.	NV-EX3
621	VSC4802	SHIELD CASE	NV-EX1
621	VSC4758	SHIELD CASE	NV-DS77,NV-DS99/990,NV-DS33
639	VMA9926	CAPSTAN HOLDER	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
B601	VHD1155	SCREW	
B602	VHD1372	SCREW	
B603	VHD1372	SCREW	
B604	VHD1372	SCREW	
B606	VHD1160	SCREW	
B608	VHD1160	SCREW	
B609	VHD1406	SCREW	
B610	VHD1161	SCREW	
B611	VHD1161	SCREW	
B612	VHD1161	SCREW	
B613	VHD1161	SCREW	
B614	VHD1161	SCREW	

B615	VHD1162	SCREW	
B616	VHD1162	SCREW	
B619	VHD1163	SCREW	
B621	XQN12+B1	SCREW	
B622	XQN12+A1	SCREW	
B623	XQN12+A1	SCREW	
B624	XQN12+A1	SCREW	
B625	XQN12+A1	SCREW	
B626	XQN12+A1	SCREW	
B627	XQN12+A12FN	SCREW	
B628	XQN12+A12FN	SCREW	
B631	XQN12+B2	SCREW	
B632	VHD1162	SCREW	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
B633	VHD1162	SCREW	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
B634	XQN16+B12	SCREW	NV-EX1,NV-DS77,NV-DS99/990,NV-DS33
N601	VHN0324	NUT	
W601	VMX2028	WASHER	
W602	VMX2751	WASHER	
W603	VMX2752	WASHER	
W604	VMX2392	WASHER	
W605	VMX2028	WASHER	
W606	VMX2028	WASHER	
W607	VMX2028	WASHER	
W608	VMX2028	WASHER	
W609	VMX2028	WASHER	
W610	VMX2028	WASHER	
W611	VMX2028	WASHER	

TOP PREVIOUS NEXT

7.2 Q1& Q2 VCR MECHANISM SECTION (2) PARTS LIST

TOP PREVIOUS NEXT

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark: △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
651	VMD2975	LED HOLDER	
652	VXA6537	SUB SHASSIS U.	NV-DS99/990,NV-DS33,NV-EX3
652	VXA6146	SUB SHASSIS U.	NV-EX1,NV-DS77
653	VXA6151	COVER PLATE U.	
654	VXA6159	CASSETTE UP U.	
B651	VHD1162	SCREW	
B652	VHD1162	SCREW	
B653	VHD1162	SCREW	
B654	VHD1162	SCREW	
B655	VHD1207	SCREW	
B656	VHD1164	SCREW	
B657	VHD1164	SCREW	
B658	VHD1171	SCREW	
B659	VHD1314	SCREW	
B660	VHD1314	SCREW	
B661	VHD1163	SCREW	
B662	VHD1163	SCREW	

TOP PREVIOUS NEXT

7.3 Q3 VCR MECHANISM SECTION (1) PARTS LIST

TOP PREVIOUS NEXT

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
501	VEG1570	CYLINDER U.	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
501	VEG1495	CYLINDER U.	NV-DS35/55
502	DFX25A7VWC	CAPSTAN U.	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
502	DFX25A7VWB	CAPSTAN U.	NV-DS35/55
503	VDG1284	DRIVE GEAR	
504	VDG1285	CENTER GEAR	
505	VDG1290	INTERFACE GEAR (C)	
506	VDG1291	INTERFACE GEAR (D)	
507	VDG1330	DECELERATION GEAR (A)	
508	VDG1331	DECELERATION GEAR (B)	
509	VDG1297	INTERFACE GEAR (A)	
510	VDG1303	INTERFACE GEAR (B)	
512	VMA9908	PULLEY COVER	
513	VMA9916	T4 GUIDE	
514	VMA9917	TENSION PLATE	
515	VMA0E52	GEAR COVER	
516	VHD1430	CAPSTAN HOLDER	
517	VMC1443	CYLINDER SPRING	
519	VEM0679	LOADING MOTOR U.	
520	VWJ1297	MECHANISM INTERFACE FLEX.	
521	VMP6271	RT FLEX. FRAME	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
522	K0ZZ00000453	MODE SWITCH	
523	VXA6124	S LOAD GEAR U.	
524	VXA6125	T LOAD GEAR U.	

525	VXA6133	PULLEY	
526	VXA6134	CHASSIS RADON U.	
527	VXA6135	CAM GEAR U.	
528	VXA6136	PINCH BEETLE	
529	VXA6137	RELEASE BEETLE	
530	VXA6138	RAIL U.	
531	VXA6169	BOAT RADON U.	
532	VXA6184	S3 BASE U.	
533	VXL2814	EJECT LEVER U.	
534	VXL2815	TENSION LEVER U.	
535	VXL2816	EJECT ARM U.	
536	VXL2897	PINCH ARM U.	
537	VXL2818	IDLER U.	
538	VYK8886	HEAD AMP U.	NV-DS35/55
B501	VHD1155	SCREW	
B502	VHD1372	SCREW	
B503	VHD1372	SCREW	
B504	VHD1372	SCREW	
B505	XQN14+B1FN	SCREW	NV-EX21,NV-DS68/88/89/25/12/15/150,NV-MX2/8/300/1/3/5/7
B506	VHD1160	SCREW	
B508	VHD1160	SCREW	
B509	VHD1406	SCREW	
B510	VHD1161	SCREW	
B511	VHD1161	SCREW	
B512	VHD1161	SCREW	
B513	VHD1161	SCREW	
B514	VHD1161	SCREW	
B515	VHD1162	SCREW	
B516	VHD1162	SCREW	
B519	VHD1163	SCREW	
B521	XQN12+B1	SCREW	
B522	XQN12+A1	SCREW	

B523	XQN12+A1	SCREW	
B524	XQN12+A1	SCREW	
B525	XQN12+A1	SCREW	
B526	XQN12+A1	SCREW	
B527	XQN12+A12FN	SCREW	
B528	XQN12+A12FN	SCREW	
B530	XQN16+B2	SCREW	
B535	XQN16+B3	SCREW	NV-DS35/55
N501	VHN0324	NUT	
W501	VMX2028	WASHER	
W502	VMX2028	WASHER	
W503	VMX2028	WASHER	
W504	VMX2028	WASHER	
W505	VMX2028	WASHER	
W506	VMX2028	WASHER	
W507	VMX2028	WASHER	
W508	VMX2751	WASHER	
W509	VMX2752	WASHER	
W510	VMX2392	WASHER	
W511	VMX2028	WASHER	

TOP PREVIOUS NEXT

7.4 Q3 VCR MECHANISM SECTION (2) PARTS LIST

TOP PREVIOUS

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Remarks
551	VMD2975	LED HOLDER	
552	VXA6537	SUB CHASSIS U.	
553	VXA6151	COVER PLATE U.	
554	VXA6159	CASSETTE UP U.	
B551	VHD1162	SCREW	
B552	VHD1162	SCREW	
B553	VHD1162	SCREW	
B554	VHD1162	SCREW	
B555	VHD1207	SCREW	
B556	VHD1164	SCREW	
B557	VHD1164	SCREW	
B558	VHD1171	SCREW	
B559	VHD1314	SCREW	
B560	VHD1314	SCREW	
B561	VHD1163	SCREW	
B562	VHD1163	SCREW	

TOP PREVIOUS